MYRMECIA

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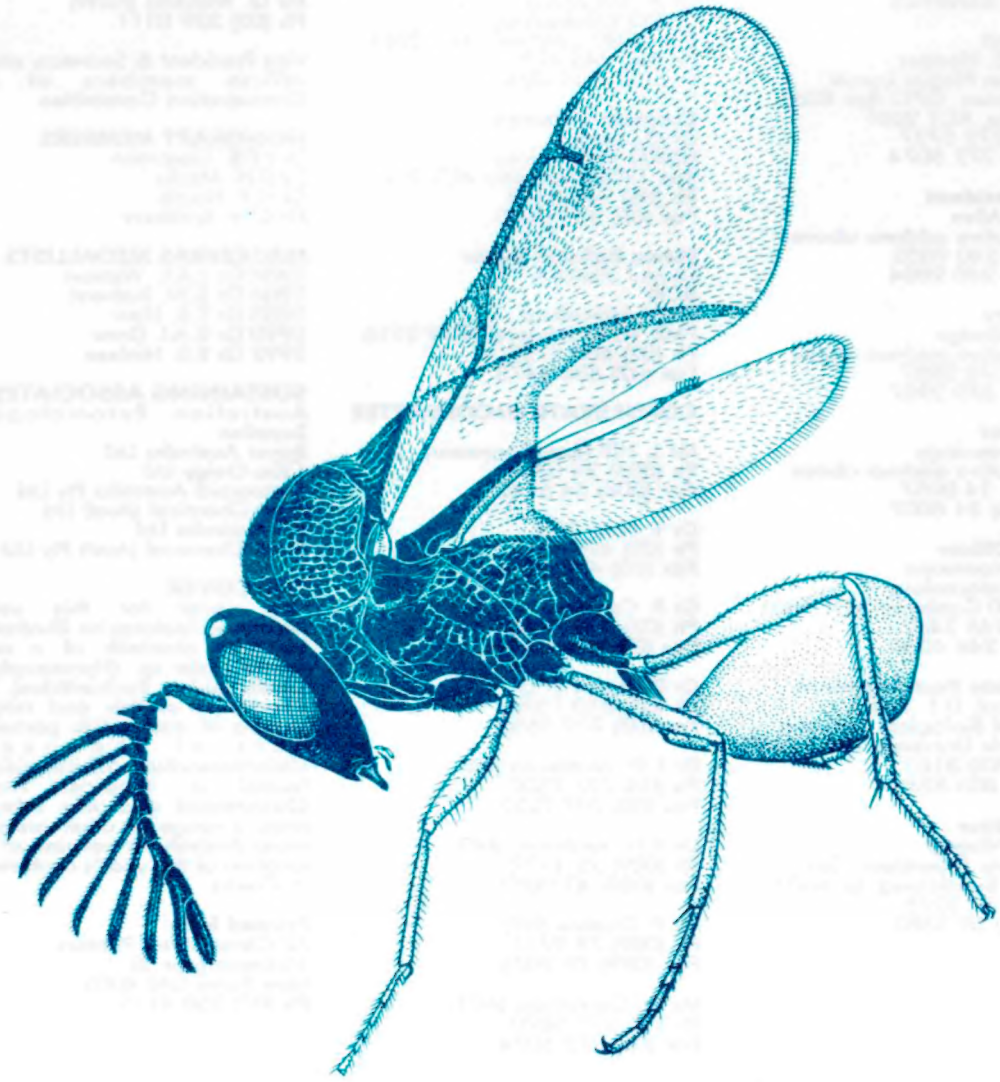

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1986 Dr R.W. Sutherst
1988 Dr T.R. New
1990 Dr R.A.I. Drew
1992 Dr E.S. Nielsen

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THE COVER

The cover for this year's *Myrmecia* features an illustration by Sybil Monteith of a male *Schizaspidia* sp. (Hymenoptera: Chalcidoidea: Eucharitidae). The immatures of this and related genera of eucharitids parasitize ants of the genus *Odontomachus*. *Schizaspidia* is found in tropical North Queensland and was selected from a range of other parasitic wasp illustrations because of the location of this year's conference in Cairns.

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MYRMECIA

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Advertising Rates for Myrmecia

	Single Issue	4 Issues (One year)
Full Page	$60	$180
Half Page	$35	$105
Quarter Page	$24	$72

These rates apply to camera-ready copy supplied by the advertiser. Where this is not supplied, an additional charge may be made for the layout. In addition, loose inserts and pamphlets supplied by the advertiser will be included in a mailout for $100 per item. The items should be of a size which will not project beyond the pages of *Myrmecia*.

NOTICE

Statements made in *Myrmecia* do not necessarily represent the views of the Australian Entomological Society. Items printed herein should not be reproduced without permission of the author of the material.

Copy Deadline for Next Issue

Material for publication in the May 1993 issue of *Myrmecia* should be in the hands of the Editor at the address below by Friday 23 April 1993. Submission on IBM-compatible floppy disk in a major word processing format is preferred. Details are available from the Editor.

Murray FLETCHER
News Bulletin Editor
Biological and Chemical Research Institute
PMB 10, Rydalmere, NSW 2116

The Treasurer
of this Society
kindly requests
all members who have not yet
contributed their 1993
subscriptions
to do so without delay.

The Society needs your
support.

EXECUTIVE REPORT

Meetings

The core Executive met on 13 November and 4 December 1992.
There was a special Executive meeting on 20 January 1993.

New Members

We welcome the following new members to 1993 membership:

Elected 13 November 1992
Miss A. BAWDEN, BSc (Hons), CSIRO Division of

Entomology, GPO Box 1700, Canberra ACT 2601. Alison is a PhD student at the Australian National University.

Ms R. CRNOV, BSc(Hons), CSIRO Division of Entomology, GPO Box 1700, Canberra ACT 2601. Rosa is a PhD student at the Australian National University.

Mr P.D. DRIVER, BSc, 18 Dresden St, Heidelberg Heights VIC 3081. Patrick is a Research Assistant and has an interest in the Odonata.

Ms K. JOHNSON, BSc(Hons), 2/4 Bindel St, Aranda ACT 2614. Karyn is a Laboratory Technician with CSIRO Entomology and has interests in insect virology and molecular biology.

Mr P.D. TAVERNER, BSc(Agr), 14 Iluka St, Glenelg North SA 5045. Peter is a Research Officer (Entomology) with the South Australian Department of Primary Industries.

Elected 4 December 1992

Ms H. JANETZKI, BSc, c/o Queensland Museum, Box 3300, South Brisbane QLD 4101. Heather is an Education Officer with the Museum and has an interest in promoting entomology to schools and to the general public.

Dr G. NORTON, DSc, CRC for Tropical Pest Management,Gehrmann Laboratories, University of Queensland, Brisbane QLD 4072. Dr Norton is Director of that Co-operative Centre and has interests in the economics and decision-making aspects of pest management.

Elected 20 January 1993

Mr T.G. BOWDITCH, BSc(Hons), c\- Dept of Agricultural Science, University of Tasmania, Sandy Bay Tas 7005. Terrence is a Postgraduate Student in the above Dept.

Ms N. PELEA, MSc, Dept of Food Science, University of Western Sydney-Hawkesbury, Richmond NSW 2753. Ninfa is a PhD Student in the Food Science Dept.

Ms L.G. COOK, BSc (Hons), 20/25 Pinkerton Crt, Kambah ACT 2902. Lynette is a Postgraduate Student at the ANU.

Resignations from Membership

Mr N.J. BARTON
Dr E. BRUZZESE
Mr P.D. CLAYTON
Dr R. DOMROW
Dr R. and Mrs G. ETTERSHANK
Ms J.H. FISK
Mr M.E. HODDA

Change of Address or Title

Dr I. ABBOTT, Dept of CALM, Australia II Drive, Crawley WA 6009

Mr A.F. ATKINS, 9 Bathurst St, Dudley NSW 2290

Dr J.K. BALCIUNAS, USDA Biological Control Unit, James Cook University, Townsville QLD 4811

Dr K.R. BROWN, status has changed to Assoc. Professor

Mr K.J. CHANDLER, Bureau of Sugar Experimental Stations, PO Box 122, Gordonvale Qld 48655

Dr D.J. CHAPPELL, Biochemistry (GO8), University of Sydney, Sydney NSW 2006

Dr A.R. CLARKE, Dept of Entomology, University of Queensland, status has changed to Dr and to FULL MEMBER

Dr R. COY, Museum of Victoria, 71 Victoria Crescent, Abbotsford VIC 3067

Dr V.A. DRAKE, Dept of Physics, University College, Australian Defence Force Academy, Canberra ACT 2600

Miss C. DITCHFIELD, from STUDENT to FULL MEMBER

Dr E.M. EXLEY, status has changed to RETIRED MEMBER. 5 Chiswick Road, Bardon QLD 4065

Mr C.G. FREEBAIRN, 83 Goldsbrough St, Taringa QLD 4068

Mr G. FROWD, status has changed to FULL MEMBER

Mr M. GARDENER, 'Kersbrooke', RMB 5180, Kawarren VIC 3249, subscription to News Bulletin only

Mr J.D. GILLETT, 'Wondaree', Friday Hut Road, Bangalow NSW 2479

Dr S. GOODWIN, Hort Research and Advisory Station, PO Box 581, Gosford NSW 2250

Dr G.F. GROSS, status has changed to RETIRED MEMBER

Mr F. GROSSBECHLER, status has changed to RETIRED MEMBER

Mr B.S. HACOBIAN, 9 Sanctuary Ave, Avalon Beach NSW 2107

Ms M.M. HARRIS, name changed to ELSON-HARRIS, title changed to Dr

Dr R. LAUGHLIN, status has changed to RETIRED

MEMBER

Dr E. LEES, Dept of Agricultural Chemistry and Soil Science, University of Sydney NSW 2006

Dr D.G. HOLDOM, 50 Glenwood Street, Chelmer QLD 4068

Prof R. KUMAR, Agric Protection Divn, Dept of Agric and Stock, PO Box 1430, Boroko, PNG.

Dr D.A. MAELZER, changed to RETIRED MEMBER

Mrs M. MASSOUD, name changed to Mrs M. ISSAC

Ms G. MAYNARD, 6 MacNaughton St, Higgins ACT 2615

Mr G.F. MAYWALD, Centre for Tropical Pest Management, Gehrmann Labs, University of Queensland, Brisbane QLD 4067

Dr G. MCDONALD, Dept of Agriculture, Swan St, Burnley VIC 3121

Mr P.A. MELNA, 59 Fakenham Rd, Ashburton VIC 3147

Mr G.A. MILLEDGE, Freshwater Ecology Section, Arthur Rylah Institute, 123 Brown St, Heidelberg VIC 3084

Mr I. OLIVER, School of Biological Sciences, Macquarie University, Sydney NSW 2109

Miss L. OLLEY, Name changed to Mrs L. LAW

Mr H. C. PARK, 307-1101 Sunkyeong Apt, Kusfodond, Kumjeong-Ku, REPUBLIC OF KOREA (As of Feb 1993)

Queensland Museum PO Box is 3300

Mr L.A.J. RADUNZ, 46 Caber Close, Dural NSW 2158

Ms D. J. RAE now Dr, STUDENT to FULL MEMBER, Dept of Science and Environment, Water Board, PO Box 73, West Ryde NSW 2114

Mr G.S. RICHMOND, lives in Perth, not Bentley

Dr P.M. RIDLAND, Institute of Plant Sciences, Swan St, Burnley VIC 3121

Miss A.M.E. ROACH should be listed as Ms A.M.E. ROACH

Dr R.J. ROBERTS, PO Box 1256, Noosa QLD 4567

Dr L.N. ROBERTSON, BSES, PO Box 566, Tully QLD 4854

Mr D.R.J. SMITH, Biotech Australia Pty Ltd, LPO Box 20, Roseville NSW 2069

Dr A.V. SPAIN, I McClelland St, West End, Townsville QLD 4810

Dr M.T. TANTON, Dept of Forestry, Australian National University, Canberra ACT 0200

Prof I.W.B. THORNTON, status changed to RETIRED MEMBER

Dr A. WELLS, ABRS, GPO Box 636, Canberra ACT 2601

Miss R.L. WHYTE, Division of Plant Protection, DPI, Meiers Rd, Indooroopilly QLD 4068

Mrs M.A. WILLIAMS, Dept of Primary Industry and Fisheries, St Johns Ave, New Town TAS 7008

Dr A.L. YEN, Invertebrate Survey Dept, Museum of Victoria, 71 Victoria Cr, Abbotsford VIC 3067

Dr A YORK, Forestry Commission of NSW, Research Division, PO Box 100, Beecroft NSW 2119

Mr J. ZHANG, FULL MEMBER, backdated to include 1992

The Treasurer reminds members that subscriptions for 1993 were due on 1 January. Although subscriptions have been flowing in, there are still many members who have not paid. Payment after 28 February does not attract the 12.5% discount.

Unfinancial members (have not paid for 1992 or 1993) lose entitlement to Society privileges, such as receiving AES publications, reduced fees to attend Conferences, voting rights etc.

Membership as at 15 January 1993

Category of Membership	Financial	Unfinancial	To Be Excluded Clause 21(c)	Total
Full	552	52	16	620
Joint	20	-	-	20
Student	91	14	12	117
Honorary	4	-	-	4
Retired	75	3	-	78
Sust. Assoc.	7	-	-	7
Affil. Socs.	3	-	-	3
Total	752	69	28	849
Newsletter only	15	3	n/a	18

From the Minutes

The Executive is considering the most effective way to update the Directory of Australian Entomology. It was considered that a membership list should come out every second year in the News Bulletin, with the possibility of telephone and facsimile numbers being included. Further discussions are required with the News Bulletin Editor.

The Executive is reviewing the initiative of the Australian Institute of Agricultural Science to seek means for the AIAS to facilitate a more co-operative and co-ordinated approach to

representing the interests of professionals in agriculture, including the development of competency standards.

The Society received a letter from the Acting Director of the Australian National Parks and Wildlife Service thanking the Conservation Committee for the thorough attention given to the Yen/Butcher draft report on 'Conservation Status of Non-marine Invertebrates in Australia'.

Guidelines for the Society's Insect Illustration Competition were confirmed. The guidelines are based on the recommendations of a Review Committee convened by Terry Houston.

The News Bulletin Editor requested information for a continuing calendar on coming entomological events to be published in the Bulletin, and for amateur entomologists to contribute more to the Bulletin. Regional Councillors and members are urged to support the Editor with these requests.

The Business Manager is planning to promote the sale of back issues of the Society's Journal and other goods.

Paul MADGE
Secretary

SOCIETY AWARDS

The attention of all members is drawn to the three advertisements at the back of this and the previous issue of *Myrmecia* calling for applications for AES Research Grants and the Phil Carne Prize 1993 and for entrants in the Insect Illustration Competition.

Please ensure that these notices are brought to the attention of all potential candidates for these three prestigious awards.

CONSERVATION COMMITTEE REPORT

New projects being funded under the Federal Endangered Species Program include four South Australian and one Victorian entomological projects, namely:

Recovery Plan, research and management phases writing for the Sciron Skipper Butterfly;
Recovery Plan, research and management phases writing for the Small Brown Azure Butterfly;
Recovery Plan, research and management phases writing for the Sword-grass Brown Butterfly;
Recovery Plan, research and management phases writing for the White-veined Skipper Butterfly;
Recovery Plan, research and management phases writing for the Otway Stonefly.

Five members of the committee commented on the draft NSW Threatened Species Conservation Bill to its authors, the NSW Threatened Species Network. The bill contained many excellent ideas but was also utopian. More importantly, we pointed out the many ways in which the bill was biased to vertebrates and unworkable for invertebrates.

Volume 22, number 6 of the Victorian Entomologist (December 1992, pages 140-144) carries the text of a talk on the "Conservation of Australia's non-marine invertebrates: an overview" by Alan Yen and Rhonda Butcher.

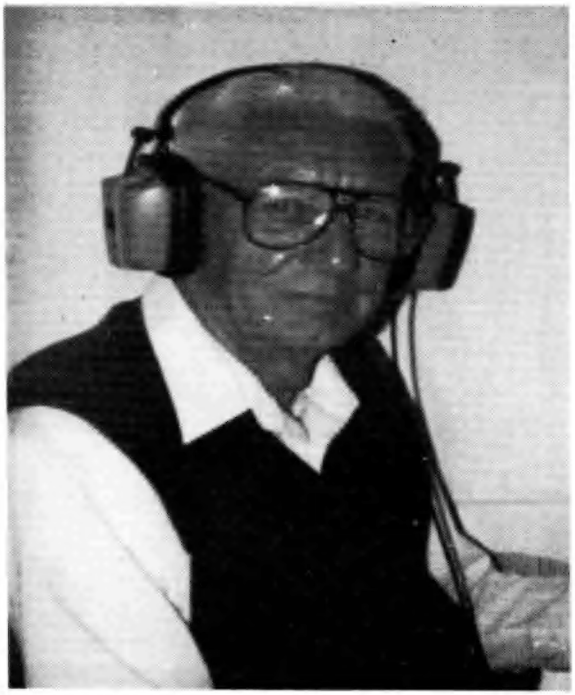
A conference on invertebrate conservation and biodiversity "Towards biodiversity and conservation" will be held at Queensland Museum 12-16 July, 1993. The original expression of interest circular drew 150 responses from 14 countries. Registration forms are now available from Dr Glen Ingram, P.O. Box 3300, South Brisbane 4101 (fax 07 846 1918). Registration costs $150 if paid before April 30.
Further details: *Myrmecia* 28(3): 25

Lionel HILL
Convenor

OBITUARY
Norman Ambrose Richardson

21 April 1906 - 6 November 1992

Norman Ambrose Richardson was born in Fulham, London on 21 April 1906. Despite having little formal education, Norman was a self-taught radio enthusiast and he made a successful career in the civil service as a radio operator. He married in 1941 and in August 1981, with wife Rose, migrated to Australia to be closer to two of his children who had settled in Queensland. He died at Everton Hills in Brisbane on 6 November 1992, aged 86.



Norman Richardson, 21.iv.1906 - 6.xi.1992

Norman developed an interest in entomology at an early age and over 60 years compiled an impressive personal collection of British Macrolepidoptera. He joined the South London Entomological and Natural History Society in the mid 1930's and was granted special life membership of its successor, the British Entomological and Natural History Society. Guided by such standards as Furneaux's "Butterflies and Moths", South's "Moths of the British Isles" (a 16th birthday gift from his parents) and Knagg's "Lepidopterist's Guide", Norman was one of that special generation of pre-war British amateur entomologists whose lives, during difficult times, were enriched by their interest in natural history.

Norman's collection notes give a brief glimpse of the treasured memories and experiences which his specimens held for him: "The single moth...is one of the Bee-hawks...This one was captured by Mum one day when I was at work, Bless her"; on the "Clouded Yellow" variety of the swallowtail - "I recorded as having taken them in Essex and believed that they became discoloured in the faulty killing bottle. However, the experts say they resemble a separate species which occurs in France! Who am I to disagree?"; light trapping for moths during the "cold war" [="phoney war"] period - "We had not been there long when we saw the lights of other 'collectors', but...they had come to 'collect' us, having fixed bayonets pointing at our tummies. You cannot believe how lame an excuse 'only collecting moths' sounds in such a situation."

During visits to Rome and Singapore in the mid 1960's he added a small exotic component to his collection, and during his time in Brisbane he sampled the butterflies and moths around his home at Everton Hills. Norman is remembered by Queensland Museum staff as a kindly and contented person whose interest in insects was lifelong. He is survived by his wife Rose, and three children David Richardson, Peter Richardson and Heather Hancock.

In accord with Norman's wish, his wife donated his specimens, as well as his entomological books, to the Queensland Museum soon after his death. The collection comprises well over 3000 specimens and is strongest in British butterflies (over 500 specimens of nearly 60 species) and moths (over 2500 specimens of over 400 species). It is a valuable addition to the Museum's holdings of foreign Lepidoptera.

Norman's brief notes on the collection were also included and these have been

catalogued in the Queensland Museum library.

Kevin LAMBKIN
Queensland Museum

OBITUARY
Neil Gough

18 September 1946 - 19 August 1992

When Neil Gough died suddenly, at the premature age of 46, while working at his microscope in the DPI laboratory in Brisbane, the entomology profession lost one of those rare individuals who was fully immersed in the problems of pest control and applied ecology, yet who retained a love of insects, particularly butterflies, just for the purposes of private pleasure.

Neil was born and grew up in Ipswich, just to the southwest of Brisbane, and he attended the Ipswich Grammar School. His family loved the bush and it was on family outings that his enthusiasm for natural history was born. He always had a soft spot for those early stamping grounds of his around Lake Manchester in the southern foothills of the Daguilar Range, west of Brisbane.

NEIL GOUGH, 18.ix.1946 - 19.viii.1992

After finishing high school he worked for CSR in the sugar industry as a Junior Field Officer based at Condong in northern New South Wales. This was one of the known localities for the extremely rare Australian Fritillary, *Argyreus hyperbius*, and he was thrilled to find occasional specimens flying in the narrow vegetated headlands between the cane paddocks.

But tertiary education called and after a year he quit his CSR job and enrolled in 1966 for a B.Sc. at the University of Queensland, majoring in Entomology in 1968. He then moved to Adelaide where he undertook an Honours course in ecology at the Waite Institute. The following year came his first opportunity for overseas travel when he was engaged by the Bishop Museum in Hawaii to collect mosquitoes in New Guinea. After a short period of training by Dr Pat Marks in Brisbane, he set off, accompanied by Mary Charlton who was later to become his wife. Using the Bishop's field station in Wau (later to become the Wau Ecology Institute) as their base, they travelled widely through remote areas breeding out larvae wherever they went. Butterfly collecting filled spare hours. This was Neil's first exposure, not only to the real tropics, but also to the culture and social problems of indigenous people in a developing nation. These were both to become abiding interests for the rest of his life.

In 1971 he returned to the Waite Institute and enrolled for a doctorate which was awarded in 1975. His thesis dealt with the biology and ecology of *Eriococcus* scales on eucalyptus. Soon after, Neil and Mary set off on a year-long overland journey from Australia to England. Moving slowly through the tropical islands of Indonesia and Malaysia, Alfred Russell Wallace's "The Malay Archipelago" became their bible leading them to many rich collecting areas little changed in the 100 years since Wallace's journey. Their journey ended in England where Neil worked in a casual position for a short time at Imperial College's Silwood Park Field Station, meeting there many of the influential insect ecologists of the day.

Returning to Australia Neil took up a position as entomologist with the Queensland Department of

Primary Industries in 1977. He was transferred to Mareeba soon after and took on investigation of white fringed weevil as a soil pest of peanuts and a silvanid beetle, later described as *Silvanolomus goughi*, which appeared in disturbing numbers on sorghum. In conjunction with Ross Storey, Neil was an enthusiastic out-of-hours collaborator in field work to build up the embryonic reference collection at the Mareeba DPI laboratory to the substantial collection of wet tropics fauna which it is today.

In 1982 Neil was transferred to Brisbane to be based at the Indooroopilly laboratories. There he was assigned to work on aspects of the growing problem of insect pests of floriculture and other ornamental plants. At the time of his death he was making progress on three fronts: the biology and control of the *Dendrobium* orchid beetle, *Stethopachys formosa*, the problem of gall wasps in the rapidly growing Geraldton Wax floriculture industry both in Australia and overseas, and the establishment of integrated control in roses using predatory mites.

Neil was a great socialiser and rarely missed a meeting of the Entomological Society of Queensland when in Brisbane. A member of its Council for many years, he served as President in 1989. He worked hard within the Society to establish a student encouragement award, to gain commercial sponsorship for the Society and to reintroduce society field trips for members and their families. A highlight of his Presidency was the visit of Dr Victor Eastop, then President of the Royal Entomological Society of London. As a memento of the occasion Neil presented him with a magnificent male of the Queensland Society's symbol, *Phalacrognathus muelleri*, mounted in an elegant case he had made himself.

Neil was an enthusiast in everything he did and this cannot be expressed better than in the words of Bryan Cantrell at his funeral: "His experiences of life were as broad as his knowledge of insects. He had a great love of intellectual discussion, books, good music, wood work, travel, food and mixing with people. But he wasn't just a thinker and talker about his many interests - he was always an active participant - whether it was acting in a play, his music lessons, pinning out his beloved butterflies, or building a cedar presentation box for the entomological society - he always entered into everything with vigour and enthusiasm."

He is sorely missed and our hearts go out to Mary and his sons Christopher and Anthony.

Geoff MONTEITH
Queensland Museum

PROFILE - Geoff Clarke

Geoff Clarke took over as Business Manager of the Society in 1992. The following profile was prepared from notes provided by Geoff.

Geoff trained at Melbourne University gaining a BSc (Hons) degree with a major in Genetics and a PhD in 1988 entitled "Adaptation and Selection: A Study in the Australian Sheep Blowfly, *Lucilia cuprina*. A quantitative genetic analysis of *Lucilia* population structure and differentiation."

While doing his PhD Geoff worked at CSIRO in Canberra on genetic control of *Lucilia cuprina* populations. On completing his thesis he moved to Port Moresby, PNG, where he was the O.I.C. of the CSIRO's Screw-worm Fly Project, using the sterile insect release method for control of this fly. From 1989 to 1990 he was seconded to the Bureau of Rural Resources, DPIE, to investigate and report on the need for and adequacy of aircraft disinsection for control of introduction of insect pests into Australia via aircraft. In 1990 he rejoined the *Lucilia cuprina* group in Canberra until moving into the position of Collection Manager of the Australian National Insect Collection in 1991 following the retirement of Ray McInnes.

Geoff's research interests are in the genetic basis of developmental homeostasis using insect model systems and in the application of assessment of developmental homeostasis in insects in biological monitoring programs for assessing environmental quality. This work has included a series of field trips to Russia looking at the impact of large agrochemical facilities on surrounding ecosystems and, recently, the impact of the Chernobyl accident.

THE AUSTRALIAN ENTOMOLOGICAL SOCIETY

NOTICE OF THE 24TH ANNUAL GENERAL MEETING

The Society's 24th Annual General Meeting will be held in Cairns on Tuesday 6th July 1993. The agenda will appear in the May issue of *Myrmecia*.

Members who wish to have items included in the agenda for discussion at the AGM should provide the Secretary with details by **Friday 30th April**.

Call for Nomination of Office Bearers and Councillors

The following offices will fall vacant at the Society's 24th Annual General Meeting on 6th July 1993. Nominations for election should be made on the form overleaf and should reach the Secretary no later than **27th May 1993**.

VACANT OFFICE		PRESENT INCUMBENT
President	☆	Dr G.H.S. Hooper
Vice President		Dr P.G. Allen
Secretary		Dr P.E. Madge
Treasurer		Mr J.T. Jennings
Public Officer		Dr I.D. Naumann
Chief Editor		Dr P.G. Allsopp
Business Manager		Dr G. Clarke
News Bulletin Editor		Dr M.J. Fletcher
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		Dr I.D. Naumann
	☆	Dr A. Wapshere
Regional Councillors		
ACT		Dr D. Dall
		Dr S. Shattuck
NSW		Mr J.G. Clancy
		Mr R.J. Faulder
		Dr S. McEvey
NT	†	Mr P. Dostine
QLD		Dr H.A.C. Fay
	†	Mr B. Franzmann
		Ms M. Griffiths
SA	†	Dr A.D. Austin
TAS		Dr T. Kingston
VIC		Mr A. Henderson
		Dr A. Yen
WA	†	Mr J. van Schagen
Representative Councillors		
Ent. Soc. NSW	☙	Dr G.R. Brown
Ent. Soc. QLD	☙	Ms C. Neale
Ent. Soc. VIC	☙	Dr R. Field

☆ requires re-election
† not eligible for re-election
☙ to be nominated by the Societies
Those incumbents not marked continue in the position for the next twelve months.

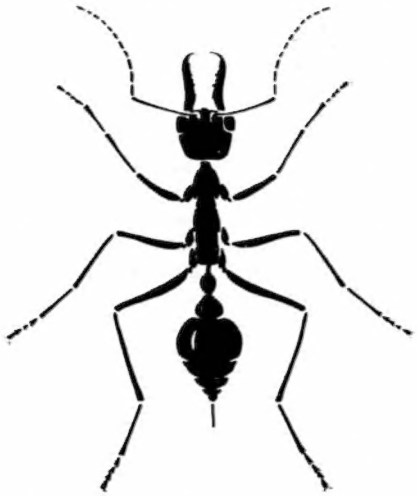
Please Note:

The President is elected annually for a maximum term of two years. Dr G.H.S. Hooper is therefore eligible for re-election.

The other Officers of the Society were appointed for a term of two years at the last AGM in Hobart. There is no maximum term stipulated for these positions.

Following the resignation of Dr G. White from the position of Technical Editor, Dr A. Wapshere was appointed by the Executive to fill the position until the next AGM when an election is to be held. Dr Wapshere is eligible for election.

If only one valid nomination is made for any position, that nominee will be declared elected at the AGM. If more than one nomination is received, a postal ballot will be conducted.



NOMINATION OF OFFICE BEARER

(This completed form should reach the Secretary by 27 May 1993. A photocopy of the form may be used.)

I Nominate . . . . . .

for election to the office of . . . . . .

. . . . . .

Name of nominator . . . . . .

Signature . . . . . .

Date . . . . . .

I second this nomination

Name of seconder . . . . . .

Signature . . . . . .

Date . . . . . .

I accept this nomination*

Signature . . . . . .

Date . . . . . .

* This nominee is requested to attach a typed statement, not exceeding 300 words, which includes the following: his/her professional qualifications, address, institution, position held, fields of entomological interest, previous offices or appointment held in the Society, and any other information which may be of assistance to members should a postal ballot be required.

APPOINTMENT OF PROXIES

Australian Entomological Society Incorporated

(This completed form should reach the Secretary prior to the meeting(s) concerned)

I, ...

of . . . . . .

. . . . . .

being a member of the above-named

Society, hereby appoint . . . . . .

. . . . . .

of . . . . . .

. . . . . .

as my proxy to vote for me on my behalf at the Council Meeting, Annual or Special General Meeting, as the case may be, of the Society, to be held on the 3rd-8th July 1993.

Signed this . . . . . .

day of . . . . . 19 . . .

Signature . . . . . .

(A photocopy of this form may be used).

BISHOP MUSEUM ENTOMOLOGIST WINS MAJOR AWARD

Bishop Museum Entomologist **Neal L. Evenhuis** has been named the 1992 recipient of the Thomas Say Award. This award is given annually by the Entomological Society of America for "significant and outstanding work in the fields of insect systematics, morphology or evolution". The award recognises Dr Evenhuis' recent publication of the *Catalog of the Diptera of the Australasian and Oceanian Regions*.

Active in the classification and evolution of Diptera for more than 20 years, Dr Evenhuis has published three books and more than 130 scientific articles. Internationally known for his work in fly taxonomy, he currently chairs the International Congress of Dipterology's committee working to establish a consistent world system for the higher classification of the Diptera.

Dr Evenhuis earned his B.S. and M.S. degrees at California State Polytechnic University, Pomona, and his Ph.D. at the University of Hawaii at Manoa. He has previously been honoured with the Oberly Award from the American Library Association for his 1983 publication, *An Indexed Bibliography of Bombyliidae*.

Report on Mite Symposium held at BCRI, Rydalmere 30 November - 1 December 1992.

A Symposium in Acarology, the first of its kind in Australia, was held over two days at the Biological and Chemical Research Institute, Rydalmere, Sydney on the 30th November and 1st December 1992.

The aim of the Symposium was to bring together mite researchers from Australia and neighbouring countries who are working in the areas of taxonomy, biology, ecology, medical, veterinary, biological control and integrated pest management.

Twenty-seven speakers presented very informative talks on a wide range of topics, including several on current taxonomic research into various mite families, use of predatory mites in biological control and integrated pest management, and medical and veterinary problems caused by mites and other Acarina. Some of the talks sparked very interesting and at times lively discussions.

A total of 42 delegates enrolled for the two days and about 20 others attended for part of the time. Delegates came from throughout NSW, from interstate and from overseas.

The symposium was held to coincide with the visit to Australia of two well known acarologists, Dr Vikram Prasad from Michigan, USA and Dr Uri Gerson from Israel.

The symposium was initiated by Eberhard Schicha who has built up, at BCRI Rydalmere, one of the largest and most comprehensive reference collections of mites in the South Pacific Region. Many delegates took the opportunity to visit the collection during or immediately following the symposium.

The Symposium, hopefully not the last of its kind, has come at a critical time for BCRI with the recent retirement of Eberhard Schicha leaving only one publicly employed mite taxonomist in Australia. It is hoped that the position at BCRI will be refilled with a mite taxonomist since the symposium demonstrated the need for such a position.

Danuta KNIHINICKI
BCRI, Rydalmere

Vikram PRASAD addresses the mite symposium at BCRI on 30 November 1992. [photo: Alasdair Langridge]

Delegates at the Acarology Symposium held at BCRI Rydalmere, 30 November - 1 December 1992 [photo: Alasdair Langridge]

REGIONAL NEWS

AUSTRALIAN CAPITAL TERRITORY

ANIC and ANU

The ANIC has had numerous visitors over the past few months, with the Lepidoptera unit being especially active. Bert Gustaffson, from the National Museum of Natural History, Stockholm, Sweden, visited to examine Nepticulidae, while Peter Mackey from the Queensland University of Technology, Brisbane had a look at New Guinean Lymantriidae. John d'Apice from Sydney examined the Couchman butterfly collection after being in Canberra for the ANIC Fund Board meeting in December. Dong-Hyoun Baek, of the South Korean National Plant Quarantine Service, visited for 3 weeks to learn techniques for handling and identifying Lepidoptera. Julie Virtue, from the Australian Museum, visited to record Tasmanian butterfly data for an upcoming book by Peter McQuillan, for which Julie has also prepared the colour artwork. And Furumi Komai, from the Osaka University of Arts, Japan, has arrived to spend 4 months working on Australian Grapholitini (Tortricidae) moths.

Other Units within the ANIC have also been busy lately. The coleopterists were visited by Lars Ove Wikars, from Uppsala University, who stopped by to gather information on beetles attracted to fire. Con Goletsos, from the University of New South Wales, visited the ANIC while searching in the Brindabellas for the larvae of the coccinellid *Scymnodes*. John Hawking, of the Murray-Darling Freshwater Research Centre, brought some of his beetles by for identification, as did Roger Kitching and two of his students from Griffith University, Graham Floater and Jacinta Zalucki. Meanwhile, Lyn Kimsey, from the University of California, Davis, visited the Hymenoptera unit to sort thynnine wasps, and Mark DuBois (Illinios, USA) spent 2 weeks working in the ant collection. Andy Austin has recently completed his work on assorted parasitic Hymenoptera and has headed back to Adelaide.

Travel has been the order of the day for several ANIC staff members. Ebbe Nielsen and Ted Edwards have spent the month of January in the

Perth region, chasing castniid moths. As with their trip last October, they reported great success with much valuable material being collected. And if this collecting trip wasn't enough, Ebbe also attended the Southern Temperate Ecosystems meeting in Hobart during January. Mike Dallwitz has also been away from Canberra. He visited Xalapa, Mexico to participate in the International Working Group on Taxonomic Databases for Plant Sciences. This is currently a fast moving area with much talk about FTPing information and exploring the Gopherspace as a method of sharing data. Anyone interested should talk to Mike about these ethereal topics. In more down-to-earth activities, Andrew Calder and Walter Dressler were both chasing insects as part of the Cape York Planning and Land Use Survey. Andrew was especially interested in aquatic beetles, and reported that although the rivers were less than cooperative, he did manage to find what he was after. Penny Greenslade spent 2 weeks in the Atherton, Queensland area collecting Collembola, followed by a week participating in the Australian-New Zealand Scientific Expedition program at Eungella. She says collecting was very good at both sites, although the weather at Eungella was a bit wetter than she normally likes.

There have been some recent changes in staffing within the ANIC. Mary Carver retired recently and has been awarded a Post-retirement Fellowship to continue her work on aphid databasing and curation of the Aphidoidea collection. Since Mary is now dedicating herself full-time to aphids, Tom Weir is assuming complete responsibilities for all the Hemiptera other than aphids. Ting Kui Qin has completed his Ph.D. studies at ANU with Penny Gullan and will be joining Bruce Halliday as a Post-doctoral Fellow in the Mite unit. They will be investigating the taxonomy of the Red-legged earth mite. Lynette Cook is now working part-time with Ted Edwards on a project to monitor populations of the Golden Sun Moth (*Synemon plana*) in the Canberra area. Wendy Lee will be assisting Peter Cranston and Tom Weir with the Diptera and Hemiptera collections, while the Hymenoptera unit has recently received support from Sita Narrain and Fleur Just. And Max Day has been made an Honorary Fellow of the ANIC. He will be pursuing his interests in leafhoppers.

Several publications within the ANIC are nearing completion. Elwood Zimmerman is currently constructing the index to volume 3 of his *Australian Weevils*, the first of the text volumes. It is expected that this volume will be published during April. David Rentz is busy reading proofs of volume 2 of his *A Monograph of the Tettigoniidae of Australia*. David reports that he expects the *Monograph* to appear as a total of 6 text volumes with 3 CD disks of tetti songs. And not to be left out, Ebbe Nielsen reports that he is completing the final check of the *Tineid Genera of Australia*, which should be out in March.

Steve SHATTUCK
Regional Councillor

CSIRO Entomology

CSIRO Division of Entomology recorded a mixed success in the last round of CRC proposals. The "Cotton CRC" was successful - congratulations to all collaborators! Unfortunately the "Centre for Biological Alternatives to Pesticides" did not finish in the placings - commiserations...

Richard Milner has been hosting a well-timed visit by Dr Chris Prior of the International Institute of Biological Control, Silwood Park, U.K. Together with staff of the Australian Plague Locust Commission they have been looking at the latest outbreaks of *C. terminifera*, and assessing the pathogenicity of various strains of *Metarhizium* for that pest, and for wingless grasshopper. Chris also presented a seminar to the Division of Entomology on his work on control of the African Desert Locust.

And talking of highly mobile insects (and people), Alistair Drake (Dept. of Physics, University College, Australian Defence Force Academy) writes "The prototype Vertical Beam Insect Monitoring Radar or VBIMR was properly installed at the Department's fieldsite near Canberra airport over spring. The electronics are now housed comfortably in a corner of the fieldsite hut, and the antenna has been screened to eliminate interference from nearby trees. The ARC awarded a Large Grant for development and evaluation of the VBIMR in November, and I am currently seeking a PhD student to do the work. I spoke on the VBIMR at the Australian Applied Entomology Research Conference in Canberra last April."

"Last May, Wayne Rochester (CSIRO Entomology) and I travelled to northeastern China to participate in radar observations of

armyworm migration with scientists from the Jilin Academy of Agricultural Science. Among our collaborators was was Sun Yajie, who visited several Australian laboratories in November 1991. I later returned to Beijing for the International Congress of Entomology, where I co-organised a symposium on insect migration with Gavin Gatehouse (U.K.) and Zhang Xiaoxi (Nanjing). In November I travelled to Narrabri to participate in Gary Fitt's "Heliothis Forecasting" Workshop." Thanks Alistair - nice to catch up with you!

Meanwhile, back at the silos, the Stored Grain Research Lab at Division of Entomology has been awarded funds from the Prime Minister's Environment Statement to find replacements for methyl bromide as a quarantine fumigant. Use of methyl bromide was recently recognised as being detrimental to the ozone layer, and research will be directed towards alternative fumigants and other physical methods as replacements for the gas. Congratulations to Jonathon Banks, who has been asked to chair the UNEP Methyl Bromide Technical Options Committee to consider the phase-out process.

In other post-harvest news, a Chinese delegation led by H.E. Mr Bai Meiqing recently visited Australia at the invitation of the Australian Wheat Board to undertake an industry orientation of Australian wheat harvesting and post-harvest activities. The delegation spent a morning viewing and discussing research at the SGRL with Jane Wright, Peter Annis, Jim Desmarchelier and Barry Longstaff.

Out in the field, Julie Carter represented the SGRL at the ever-popular Orange Field Days, where much interest was shown in the CSIRO tent.

Construction of the new CSIRO Entomology Facility in Montpellier, France, is proceeding within budget and essentially on schedule under the supervision of John Jaques. Opening date is set for sometime in June '93. David Briese has returned from there to Canberra after a stay of some three years, and will now run the Scotch Thistle control program; Richard Groves has taken over as Officer in Charge of the Montpellier facility.

The first field release of the lepidopteran *Leucoptera spartifoliella* for control of Scotch Broom will take place in February, and a second potential agent - a psyllid - will be arriving in the country soon after for continued testing. Go to it insects!

David DALL
Regional Councillor

NEW SOUTH WALES
Metropolitan

Research Division, Forestry Commission of NSW, West Pennant Hills

Biology group staff seem to be specialising in versatility lately! Christine Stone has produced a daughter (Sally) in her usual efficient manner and is now training her to assist with her research projects in future years. These presently include investigating the relationship between psyllid attack and bell miners on blue gums near Wyong. Chris Ann Urquhart and Darren Waterson have both gained their "Elevating Work Platform" cards and Chris Ann spends two days every month, perched 14m high in a cherry picker with Alf Britton from the Morisset District, counting and measuring leaves and assessing insect damage, while Darren is doing bird counts on the ground and is fast becoming an expert bird identifier.

Darren Waterson will be using his cherry picking skills with Paul Micallef on a project to detect the effects of pollution on Norfolk Island pines from Palm Beach, north of Sydney, to Cronulla in the south. This project will hopefully detect whether the new sewage deep ocean outfalls are successful in preventing detergents being blown on to coastal vegetation.

Trial plantings of eucalypts (*Symphyomyrtus*: 20 spp., 35 provenances; *Monocalyptus*: 15 spp., 35 provenances; *Corymbia*: 2 spp., 5 provenances) will be established in the Coffs Harbour area during March. These will be monitored intensively over the next 3 years by Robert Eldridge and Jack Simpson, to study the impact of insects and diseases on selected genotypes. Robert is also hoping to look at the incidence of stem damage in regrowth eucalypt forests, but is snowed under with the responsibilities of many administrative and "other" tasks.

Debbie Kent and Jack Simpson are still investigating aspects of the biology and ecology of Ambrosia beetles in eucalypt forests and are coping well with international interest in their discovery of a eusocial beetle. They have also shown a flair for drama in doing a re-enactment

for Quantum.

Alan York is currently looking at the response of terrestrial invertebrate communities to the application of sewage sludge in pine forests and eucalypt plantations, and Chris Ann is being kept busy sorting the contents of his pitfall traps and identifying ants.

David Spolc and Robert Eldridge will be conducting a workshop for forestry staff and private plantation growers in March on the control of *Sirex noctilio* in pine plantations.

Biological and Chemical Research Institute, Rydalmere

Activity on the insect front reaches its peak during the human holiday season. Graeme Baker is coping with outbreaks of Australian plague locust in several parts of the State. Wingless grasshopper, on the other hand, has been severely restricted by parasitism by mermithid nematodes and other controls.

Gary Levot and the other blowies have been busy monitoring sheep blowfly populations following extensive rainfall over high risk areas. Gary has also been active on the forensic front. Jane Drummond of the Waite has spent more time with Gary's group working on highly pyrethroid resistant sheep body lice.

Martin Horwood's portfolio has concentrated on the German cockroach and Queensland fruit fly, Victor Rajakulendran has been busy with fieldwork in the Gosford region and Graham Goodyer has his usual range of odd pasture problems like pink ground pearls, mirids and thrips.

Eberhard Schicha has announced his retirement after 23 years with the Department working on the taxonomy of agricultural mites. His main work, on the predatory family Phytoseiidae, led to two comprehensive volumes revising the faunas of Australasia and the Philippines. He also contributed significant publications on the Tetranychidae and other families. His most recent work was with the minute Eriophyidae and it is hoped that he will be able to continue with this in retirement. It is also hoped that the position can be retained in mite taxonomy. This will ensure that the increasing number of applied entomologists who find themselves dealing with mite problems will have continuing taxonomic input to their programs.

The mite symposium held at the Institute 30th November and 1st December attracted wide interest from acarologists around Australia and overseas. A full report is published on page 10.

Murray Fletcher and Max Day (CSIRO Canberra) have swapped visits to continue preparation of a checklist of described Australian Cicadelloidea with Murray in Canberra in November and Max in Sydney in January.

Alan Clift and Mary Ann Terras attended the Australian Mushroom Growers National Industry Conference in Fremantle, WA in November and visited the WA Department of Agriculture while in town.

Visitors to the Institute have included Dr T.W. Drinkwater, of the Grain Crops Institute, Potchefstoom, Republic of South Africa, to see Graham Goodyer on identification and control of a range of soil insect pests and Dr Chris Prior, IIBC, Silwood Park, England, to discuss the potential use of *Metarhizium anisopliae* as a bioinsecticide to control wingless grasshopper with Graeme Baker. Many of the acarologists attending the mite symposium also took the opportunity to look at the mite collections held at the Institute.

Department of Medical Entomology, University of Sydney at Westmead Hospital.

We have two new members of staff. Karen Willems, commenced on a part-time basis for 4 months from November; Karen has been replacing Merilyn Geary while Merilyn is attending a computer training course. Paul McKenzie started working with us in January as a trainee Laboratory Assistant, and will be with us for three months.

Richard Russell, Stephen Doggett and Merilyn Geary attended the Acarology Symposium held at BCRI, Rydalmere in November. Richard presented an outline of the acarological functions at Westmead Hospital and Stephen discussed his tick studies and the Lyme disease programme.

Richard, Stephen, Peter Wells and John Clancy all presented papers at the Sixth Australian Arbovirus Symposium, 7th - 11th December 1992, in Brisbane. Richard presented 'The surveillance of arbovirus activity in N.S.W. 1989 - 1992'. Stephen presented two papers, the first : 'Lyme Disease - the search for the causative agent in southeastern Australia' and the second (in joint authorship with Tony Sweeney and Richard Piper) : 'Host parasite relationships of

AGVIEW 92: Martin Horwood spreads the word about European wasp to interested members of the public.

AGVIEW 92: Part of the Entomology Display at Agview 92 held at Camden NSW in October.

microsporidia infecting mosquitoes'. Peter's paper was titled 'Vector competence of *Aedes vigilax* and *Culex annulirostris* for Ross River virus and other alpha- and bunyaviruses. The title of John's paper was "Investigations into the influence of temperature on populations of *Culex annulirostris* Skuse (Diptera: Culicidae) in NSW". Peter also presented a poster "Vector competence of *Aedes alternans* for Ross River virus".

The Lyme disease project finished in December, and Danielle Avery has left the Department. Stephen is continuing with us and is now working with John on the N.S.W. Arbovirus programme; Stephen has replaced Peter Wells on the programme. Peter is now investigating "Growth of Ross River virus field strains and genetic variants in vector mosquitoes" on a NH&MRC funded collaborative project between Richard and Dr Lynn Dalgarno of the Department of Biochemistry and Molecular Biology at the Australian National University.

Visitors to the Department have included Dr Jan Lundstrom from Sweden following the Arbovirus Symposium in Brisbane, and Dr Charles Calisher from the USA who has been involved with various arbovirus matters in Australia for 4 months from October.

CERIT, the Centre for Entomological Research and Insecticide Technology, University of New South Wales.

It is nice to report that CERIT made it through another year just in the black, despite the recession.

The Christmas and New Year break was full-on in the insect rearing department to cater for the heavy demands of our research and testing programme. Staff were also kept busy with a lot of enquiries from the public, especially about termites. European wasps, cockroaches, fleas, brown ants, bird lice and even pubic lice must also have been active across the summer period based on the numbers of phone calls received!

Martin Shivas, in collaboration with Gary Levot, NSW Dept. Agriculture & Fisheries, is very busy testing field strains of *Lucilia cuprina* for oviposition suppression resistance to pyrethroids. He is making progress towards developing a quick screen for detecting field resistance as part of a project funded by WRDC. Jenny Anderson continues to advance towards establishing buffalo fly in culture at CERIT, without a beast on site - a project supported by MRC. She has been sweating it out in her 32 degree room many hours each day observing fly behaviour.

Rowena Bower, a Biological Science student, has joined the CERIT team in preparation for undertaking her honours degree in 1993. She proposes to do an investigation on the effects of insect growth regulators on mosquitoes. A school student from Springwood, Kate Macqueen has just completed a special HSC biology project on colour preferences in *Lucilia cuprina*.

Lynette McLeod has moved from UNSW Fowlers Gap Arid Zone Research Station to Sydney with her family to write up her PhD on arid zone blowflies.

Visitors to CERIT since October included Dr Neil Galbraith, Dr George Holan, Dr Tom Spirling and Paul Savage from CSIRO Chemicals and Polymers, Melbourne; David Overend, Ciba-Geigy Australia; John Mullen, NSW Agriculture, Orange; Dr Parat Singh, Formerly India; Professor Siriwat Wongsiri, Chulalongkorn University, Bangkok; Dr Graeme Smith, Bayer, Germany; Dr Bill Heilman and Dr Rami Cobb, Cyanamid America and Australia respectively.

School of Biological Sciences, Macquarie University.

In September Noel Tait and Dave Briscoe attended the 1st International Onycophora Symposium at Leicester, U.K. Australia was well represented at the symposium. Dave and Noel presented 4 papers on Australian and New Zealand Onychophora. This research was carried out by Dave, Noel, Mandy Reid also from Macquarie University and Dave Rowell from A.N.U.

Dinah Hales is on study leave for the first half of 1993 and intends to use this time to catch up on new ideas and techniques in aphid genetics. Paul Sunnucks will be arriving from the U.K. in March as a Research Fellow. Paul will be working on aphid mitochondrial DNA. Congratulations to Rita Holland for obtaining her Honours, Martin Horwood for the acceptance of his Masters thesis and Eren Turak for submitting his Masters thesis. Rita is now doing antibody staining for hnRNPs in *Myzus persicae*. Eren has started his new part-time job at the Royal Botanic Gardens on the fig psyllid *Mycopsylla fici*. Eren will also be working part-time on a 12 month project on the macroinvertebrates in Mars Creek and the

recently constructed artificial lake on the Macquarie campus. Frank Burrows and Dinah Hales from the School of Biological Sciences and Doug Stewart from the Graduate School of Environment are also involved in the Mars Creek project.

Associate Professor Dick Frankham is about to return from study leave in the U.S.A.. Lynn Woodworth a second year Ph.D student is currently preparing a paper describing the effects of fluctuating population size on inbreeding, whilst continuing her experiment on minimum viable population size in *Drosophila melanogaster*. Meg Montgomery is in the process of setting up an experiment using *D. melanogaster* to test whether mobile genetic elements will increase genetic variation.

Andrew Beattie's ant group is currently undertaking fieldwork in Fowlers Gap (Broken Hill). Professor Steven Handel, School of Biological Sciences, Rutgers University, New Jersey is visiting for five months and will be lecturing, giving seminars and doing fieldwork in the Oberon area. Rod Peakall is taking up a lectureship at A.N.U. in May and although we are sorry to see him leave we wish him well in his new position. Andy and Dick Frankham will be busy in the first semester teaching a new course BIOL-349 Conservation Biology.

Lou Rodgerson is in the midst of fieldwork at Myall Lakes National Park. She has had many volunteer Ecology students helping her assess the factors affecting seed predation of ant dispersed species. Ros Blanche has just returned from a working holiday in S.E. Queensland and northern NSW. She was collecting gall insects on eucalypts. Lesley Hughes is beginning a project on pollination of *Stylidium* (throughout eastern Australia) in order to assess the response of this species to climate change. Janice Lord (a new post doctorate in the Ecology Lab) has just finished a project looking at seed predation by a wingless chloropid fly of two important grass genera of New Zealand. Visiting researcher, David Norton (a New Zealander!) has been looking at insect fauna of forest fragments.

Macleay Museum, University of Sydney.

The entomological scene at the Macleay Museum has been very quiet for the past few months. There are preparations for a second enquiry into the museum and terms of reference are now being drafted. Some collections within the Museum will be rationalised but what will happen to the insect collection is as yet unknown. Woody Horning will continue to act as Director of the Museum until the end of this year. After that, he will concentrate on finishing a few projects until he retires early from the University in late September 1994. At this stage he does not plan to continue with entomology.

University of Western Sydney (Hawkesbury)

In late November the Integrated Pest Management Service hosted Nick Martin from New Zealand Crop and Food Research, prior to the Acarology Symposium at BCRI, Rydalmere, and were visited by Uri Gersen and Russell Parker after the symposium's completion. The Service is currently hosting Dr R.N. Singh from the Hindu University, Varanasi, India, who is interested in developing integrated mite control in vegetable crops.

Russell Cant, PhD Student, was inundated with over 2000 bronze orange bugs when a newspaper article was written about his work.

The Apiary ran another very successful Summer School in Beekeeping in January, thanks to Steve Johnson, Apiary Manager, and Owen Lowe, Tutor in Apiculture.

John CLANCY
Regional Councillor

Australian Museum

The Australian Museum has just closed **Gargantuans from the Garden** which will next be travelling to Melbourne. This outstanding exhibition of giant "animatronic" insects and spiders has been developed by staff at the Australian Museum. Dan Bickel played no small role, particularly in verification of entomological detail. The exhibition will tour nationally after closing in Sydney on 5 February 1993.

A principal objective of the exhibition was to bring to the public's attention the beauty and diversity of insects in their habitats and to display this in a dynamic, entertaining and informative, world class show. The official press release informs us that "the Australian Museum is well placed to initiate such a prestigious exhibition. It is recognized as one of the top five natural history museums in the world. The scientific accuracy of movement and visual detail replicated in the 'gargantuans' is without parallel (except of course

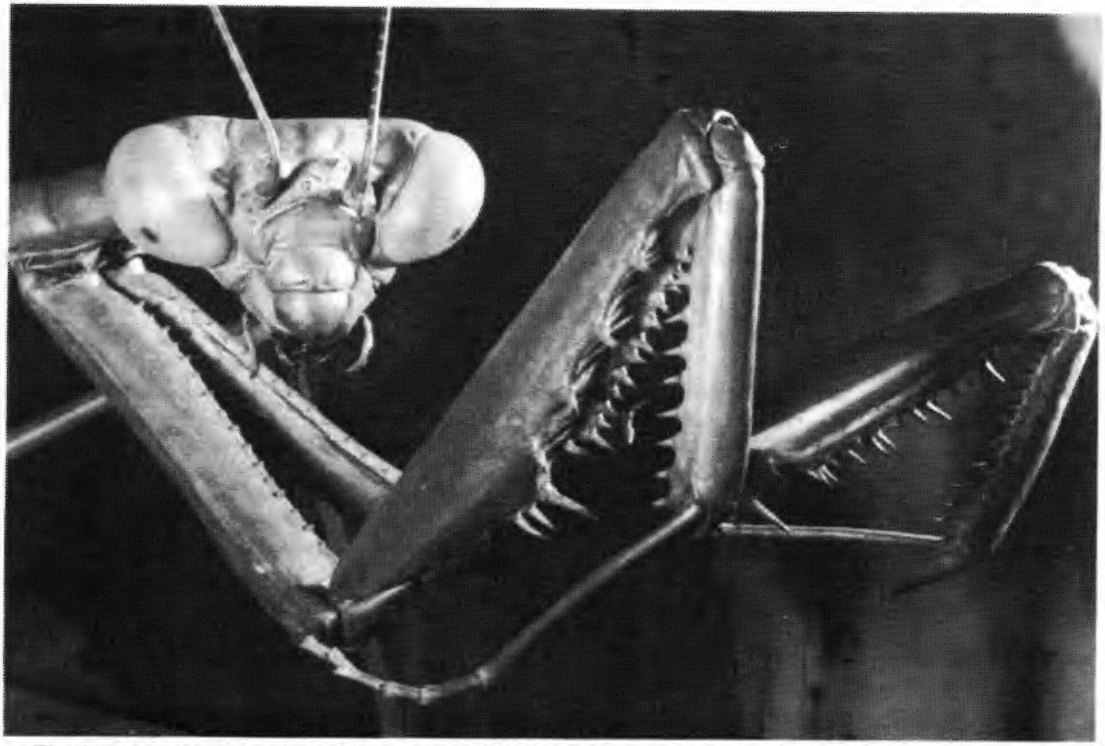
in naturel). Never before have such delicate and intricate creatures been reproduced at 56 times their normal size, with such detail and in a manner that will simultaneously delight, tantalize and educate all who view them. One's perception of an insect or spider [we are assured] will certainly never be the same again".

Sydney based company, Sally Animatronics, won the Museum contract to build the animatronic models which include a giant scorpion *Urodacus novaehollandiae*, giant bull ants *Myrmecia nigrocincta* in their nest, a redback spider *Latrodectus hasseltii*, a 3.2m cicada *Cyclochila australasiae*, a 5.5m long praying mantis *Tenodera australasiae*, a 100cm dung beetle *Onitis alexis*, and a giant 90cm mosquito biting a 3.8m human foot, complete with thong!

Each "Gargantuan" was sculpted in foam from videos, specimens, drawings and scanning-electron microscope images. Special emphasis was applied to the careful structuring of body parts and the dynamics of animated movement. From this basic foam body shape, clay "skirt" moulds were made, which provided the form for the outer layer of fibreglass. The shell sections were then shaped and cut, and the animation mechanism fitted. Finally the fine detailing, colouring and patterning was applied.

Included in the display is a small sample of George Bornemissza's exquisite beetle collection on loan from ANIC. The exhibition is "jam packed full of wonderful surprises, including a tropical field station and a suburban kitchen complete with all that creeps and crawls. A display on metamorphosis and one on biological control will ensure that visitors leave with a renewed respect for insects and a thorough knowledge of their unique and vital place in our ecosystem."

Shane McEVEY
Regional Councillor



The head of the 5.5m model praying mantis in the "Gargantuans in the Garden" exhibition at the Australian Museum. [photo: C. Bento]

NEW SOUTH WALES

Country Areas

It seems to have been a quiet period for most people. One person told me that all that he could offer was a list of the presents he received for Christmas.

North Coast Agricultural Institute, Wollongbar

John MacDonald attended the International Symposium on *Baccinium* spp. [blueberries and their relatives] held at the University of Melbourne on the 14th and 15th of January 1993. He presented a paper on his work at Corindi, northern NSW, on developing an Integrated Pest Management system for low-chill blueberries.

University of New England, Armidale. Department of Agronomy and Soil Science

Peter Gregg and his team are delighted with the success of the proposal for a Co-operative Research Centre for Sustainable Cotton Production. The proposal includes a major program on insect pest management, under the direction of Gary Fitt (CSIRO, Narrabri). Peter Gregg is the leader of the sub-program on insect ecology, and most of his own research, and that of several of his postgraduate students, will come under the CRC umbrella.

Research on *Helicoverpa* forecasting is proceeding at UNE. A recent workshop held at Narrabri evaluated the work of the *Helicoverpa* Inland Research Group and gave encouragement for the development of a national *Helicoverpa* forecasting system. Funding for the purpose of evaluating such a system is now being sought. Meanwhile, studies on the dynamics of *Helicoverpa* in the inland continue. Rob Duthie and Holly Ainslie have just returned from a survey trip to western Queensland, conducted in 45° heat and clouds of sandflies and mosquitoes following the recent rain. The results are proving interesting, because this is our first opportunity to study the effects of really heavy summer rain on inland *Helicoverpa* populations.

Successful postgraduate students include Melissa Betts (Dip.Sc.Ag. on mating disruption in *Helicoverpa*) and Allan Spessa (M.Rur.Sc. on the oviposition dynamics of the same species). New students include Supawan Kianmatee, from Thailand, working on the effects of barley allelochemicals on armyworms, and David Sanderson, studying the environmental biology of *Heliothis* (=*Neocleptria*) *punctifera*.

Richard FAULDER
Regional Councillor

NORTHERN TERRITORY

Office of the Supervising Scientist Alligator Rivers Region Research Institute

Peter Dostine returned from leave in mid January to the pleasure of monsoonal weather and the pain of serious writing. We are anticipating the arrival of ANU Honours student Mike Smith to commence a project on faunal recovery on a stream polluted by acid mine drainage. Visitors have been few in the lead up to the green season. Andy Austin from the Waite Campus, University of Adelaide dropped in for a brief respite from his searchings for parasitic wasps.

NT Health, Medical Entomology Branch

The arrival of monsoon rains and the flooding of coastal marshes has ended the helicopter salt marsh mosquito control program until next dry season. This is a welcome relief for Paul Donaldson and Ross Nowland, who can get their feet back on the ground for virus collections and wet season fresh water mosquito surveys.

The Branch welcomes Brian Montgomery, formerly of Queensland DPI; he begins work as entomologist at the start of February. The addition of Brian completes the professional staffing of the Branch. All are looking forward to working with him. Another newcomer to the Branch is Kerith Donnan. Kerith has been with the Branch for two months now and is proving to be a valuable Branch member.

Peter Whelan recently attended the Brisbane Arbovirus conference and presented two papers on work with other colleagues on virus collections from mosquitoes and recent mosquito borne epidemics in the Northern Territory.

Gwenda Hayes and Peter are finishing off the Darwin South Biting Insect Investigation. The program is to assist in the planning for future expansion of Darwin.

Culicoides ornatus and *C. hewitti* are proving to be the main problem species with some of the collections from the inner Darwin harbour area being the highest so far recorded for these species in the NT and likely to pose problems for

the planners.

DPI&F, Quarantine and Inspection

Ted Fenner reports that Hermes Perona has resigned as NAQS Plant Scientist prior to marriage in Holland later this year. Hermes plans to canvas tertiary institutions in Europe on the possibility of furthering his entomological destiny. In October Ted Fenner and Hermes Perona attended a meeting of the quarantine entomologists in Adelaide. October also saw weeks of trapping for medfly in the Tortilla Flats to Adelaide River district about 100km south of Darwin. No unwanted visitors from the west were detected in the area.

DPI&F, Weeds Branch

Wendy Forno from CSIRO Brisbane was a December visitor to Darwin. She inspected *Mimosa* biocontrol sites and attended a meeting to coordinate research efforts between DPI&F and CSIRO. A shock announcement has been the sudden resignation of Carey Smith to take up a position at the Menzies School of Health. Her departure was triggered by the uncertainty surrounding continuation of Federal funding of the *Mimosa pigra* project beyond June.

DPI&F, Entomology Branch

Kaye Hergstrom has replaced Jaye Layland to continue the research on *Thrips palmi*. Monitoring for *T. palmi* property freedom status is now in the capable hands of Elliott Crowson. Haidee Brown is now concentrating on researching the biology of thrips, while Michael Neal continues the medfly and *Parlatoria* scale monitoring.

Stuart Smith has just returned from a well deserved holiday in New Zealand. Deanna Chin is working on the chemical control of Palm Leaf Beetle, and recently gave a refresher course on insect collecting/pinning/preserving to all entomological "inmates".

Visitors have included John Allen from the WA Dept of Ag. to collect dung beetles and Shaun Hood together with PhD supervisors Mali Malipatil, Peter Room and Myron Zalucki to discuss Shaun's project on biocontrol of cashew pests at Wildman River.

Peter DOSTINE
Regional Councillor

NORTH QUEENSLAND

James Cook University
School of Biological Sciences

The Department of Zoology is a participant in the recently announced CRC for Tropical Rainforest Ecology and Management. Research programs with a strong entomological component include Biodiversity and Disturbance and Change in Rainforests.

Robyn Jackson has just completed the field work component for her Ph.D. research on insect herbivory in *Alphitonia* species.

Phillip Weinstein has recently been appointed an Associate Lecturer in the Zoology Department. His research interests lie in the epidemiology and vectors of viral diseases, such as Ross River Fever.

Chris Hill reports general staff relief in the break in teaching duties and obvious joy at the prospect of some uninterrupted field work.

QDPI - Mareeba and Innisfail

Andrew Calder (CSIRO) accompanied Paul Zborowski on a recent trip to Cape York as part of the continuing CYPLUS trapping and survey work. At that stage the Wet still had not broken and pickings were on the lean side. As of mid-January Paul has had to fly into Batavia Downs on the mail plane, as the Cape has experienced heavy rains over the past few weeks (partly due to Cyclone Nina) and roads into and out of the area are generally impassable.

Keith Halfpapp drew the short straw in December when 'forced' to visit Hayman Island for 2 days to examine and discuss cane weevil borer and four-spotted coconut weevil problems in palms with resort staff.

Harry Fay attended a Workshop on Insect Behaviour and Chemical Ecology at the Centre for Tropical Pest Management in Brisbane in December, organised by Don Sands and Bill Kitching. It provided an opportunity to catch up with former colleagues Lindsay Barton Browne and Brian Fletcher.

Judy Grimshaw has taken up residence in the Mareeba complex to undertake her Quarantine Entomologist role from a more appropriate vantage point. QDPI Entomology numbers in the far north have now swelled past the 10 mark.

Ross Storey is recovering well after sustaining a head injury at work in December. While it didn't make for such a bright Christmas things were

looking far better in the new year, and his beetles shouldn't be fretting for much longer.

French medical entomologist, Nicolas Degallier (ORSTOM), currently based in Belem, Brazil, visited the north for 5 days in mid-December to do some rainforest collecting and to examine the QDPI collection. Nicolas works on mosquito arbovirus transmission but has an interest in the Histeridae. On a single visit to one of Ross Storey's trapping sites he picked up a handsome specimen of *Phalacrognathus muelleri*, much to the amazement of the local entomologists.

Penny Greenslade spent part of November and December in the far north collecting Collembola in Wet Tropics areas. She presented a seminar during her stay on "Are Springtails Bioindicators?" at the CSIRO Tropical Forest Research Centre, Atherton.

QDPI - Ayr

John Brown is taking a break from a hectic wet season schedule to get married on Saturday, 23 January. We wish John and Lyn good times together. Mareeba entomologists collectively sighed relief when informed the bucks party would be held in the Burdekin.

BSES - Meringa and Tully

BSES entomologists conducted a pest control course in November/December for sugarcane pest control operators. Post-Christmas Keith Chandler was preparing himself for hopefully a deluge of registrations for this year's Scientific Conference and AGM in Cairns, and reports a dribble of early registrants.

Queensland Health - Cairns

Following the dengue epidemic in Townsville in 1992, where at least 400 cases were confirmed, David Sinclair spent much of his time in November and December providing technical assistance in the production of a 90 second TV commercial, an information sheet, and a pamphlet, as part of a Dengue Fever Prevention Campaign. The campaign was successfully launched in Cairns on December 4 by the Queensland Health Minister, Mr Ken Hayward, under the logo "Screen it up, Slap it on, Tip 'em out", and was aimed at people living in North Queensland.

David also attended the sixth "Arbovirus Research in Australia" symposium in Brisbane on December 7-11, where there were, amongst others, numerous papers presented in the Dengue and Epidemic polyarthritis area.

CSIRO Davies Laboratory - Townsville

As the *Leucaena* psyllid project is winding down Marie-Louise Johnson had little to report on the activity front. John Holt was still on leave so the termite news will have to wait until the next issue.

Cape Tribulation Tropical Research Centre

George Weiblen, a Watson Fellowship holder from the Rocky Mountain Biological Laboratory, is visiting the Research Centre for three months to work with Hugh Spencer, its Director, on pollination dynamics of *Ficus variegata*, the common cluster figs of the region. These figs and their wasps have been the subject of a three year study at the Centre and George's visit will concentrate on the pollinators and their parasitoids.

Harry FAY
Regional Councillor

S.E. QUEENSLAND

QDPI Division of Plant Protection

John Hargraves (Redland Bay) was visited by Nancy Endersby of Vegetable Research Station, Frankston, Vic. for talks on topical dosing of diamondback moth strains. She was also taken to see broccoli plantings on the eastern Downs, Lockyer Valley and Redland Bay.

Bernie Franzmann (Toowoomba) was visited by Dean McBride, Extension Entomologist, North Dakota State University for discussions on pests of field crops particularly sunflower insects.

I.P.M. - BUGS for BUGS

Dan Papacek and Dan Smith (QDPI) will be making a trip to Papua New Guinea in early February as part of an HRDC funded project to investigate beneficial insects of soft scale in citrus. They will be visiting coffee and citrus plantations in the Highlands. The main scales of potential interest are long soft scale *Coccus elongatus* and green coffee scale *C. viridis*.

Bernie FRANZMANN
Regional Councillor

Lands Department
Alan Fletcher Research Station

Graham White and Allan Tomley visited the Tropical Weeds Research Centre in late November, just in time to witness at close quarters a fire trial on rubber vine (perhaps a bit too close - ask Graham what a hot whirly wind tastes like!). Graham and Allan inspected a potpourri of weed infestations (parthenium, prickly acacia, rubber vine, harrisia cactus) and discussed current and future weed biological control projects.

Marie Ablin sent a third consignment of the introduced control agent *Heteropsylla spinulosa* to Laloki Agricultural Research Station in Papua New Guinea in early December. Once through one generation in quarantine, the psyllid will be released onto *Mimosa invisa* (giant sensitive plant) to help combat this troublesome thorny vine.

The Argentinian stem-boring moth, *Platphalonidia mystica*, was released by the Minister for Lands at Rockhampton, on the 12th of November. The moth is expected to reduce the flowering and seed production capacity of the agricultural weed, *Parthenium hysterophorus*, also originating in the tropical Americas.

P. mystica was imported from Argentina in 1989 and extensively tested in quarantine by Rachel McFadyen before being cleared by Australian quarantine for release in the field. It is hoped that the moth will prove to be drought resistant, a problem with previous insect releases on parthenium, and that it will contribute significantly to the control of this weed in agricultural areas.

CSIRO Long Pocket

Don Sands is involved in an informal collaborative project in NSW to study and conserve the Richmond birdwing butterfly (*Ornithoptera richmondia*), originally common in rainforests between Maryborough, Qld, and the Clarence River in northern NSW. The species is threatened, with only about 1% left of the original area of suitable forest
habitat. It feeds on two species of *Aristolochia* which are now in critically short supply. Don and Bob Moffatt, NSW Parks and Wildlife Service, have devised a conservation strategy that involves an education program for this species in 40 schools, coupled with a project to propagate and distribute quantities of food plants. One aim is to determine the most suitable variety of *A. praevenosa* for planting in home gardens, schools and in appropriate regenerating forest areas. The Balunyah Nursery at Coraki, near Ballina which is owned and operated by an aboriginal co-operative society, will produce the food plants for sale through retail outlets. Some authorities in Queensland may also become involved in this conservation effort.

Two local research projects will close by the end of the financial year due to termination of funding. The 3-year study of the pest status of leucaena psyllid in Australia, involving collaboration with Qld DPI, was funded by the Meat Research Corporation. The final report is in preparation. Investigation of the feasibility of using attractants in control of fruit piercing moths will cease on 30 June. This work is a Divisional initiative carried out in part using funds provided by ACIAR that were not specifically tied to this project. It also involved collaborative work with the Chemistry Department, University of Queensland, funded by the CTPM. Two synthetic mixtures of fruit volatiles have been produced that attract moths in flight tunnels, and the remaining time will be spent in trying to determine the chemical basis for this attraction.

Queensland Institute of Medical Research

During October-November, Michael Brown visited Fortaleza, Brazil. Michael is involved in a joint Tropical Health Program (UQ and QIMR), Federal University of Ceara, and National Foundation of Health project to develop community-based control strategies for *Aedes aegypti*. This container breeding mosquito is the vector of dengue, DHF, and (historically) yellow fever in Brazil. Michael was investigating the chlorine tolerance of the freshwater copepods *Mesocyclops* spp. which are being used as biological control agents of larvae. *Mesocyclops* spp. have been collected locally and introduced into water storage containers such as large jars, concrete tanks and cisterns.

The 6th Australian Arbovirus Symposium held at the Bardon Professional Development Centre during December was an outstanding success. Brian Kay, Scott Ritchie, Michael Brown, Lynda Muir, Craig Jennings and Pieter van Essen presented papers, while Michelle Cousineau displayed a poster.

Pieter van Essen and Julius Kemme have joined the group for six months to gain experience 'in the field' with tropical mosquitoes. Pieter and Julius are Masters students from Willem Takken's laboratory at Wageningen University in the Netherlands. At Wageningen they have been studying the behaviour of *Anopheles* sp. in response to human odours, CO_2 and some steroids, using a sophisticated wind tunnel/olfactometer. In Queensland, Pieter and Julius will conduct experiments trapping salt-marsh mosquitoes, particularly *Aedes vigilax*, using CDC traps baited with various attractants.

University of Queensland

A most enjoyable evening was spent by all who attended the retirement farewell for Elizabeth Exley on 14th December (see photos this page and over). About 100 colleagues and friends attended the dinner, which followed the Entomological Society of Queensland meeting. During the meeting Ian Naumann spoke generally on the importance of maintaining expertise and teaching in systematics, while Graham White and Joan Bryan described Elizabeth's role in the Entomological Society of Queensland, and her contributions to the Department of Entomology respectively. Finally past students Judy King, Lesley Ballantyne and Tim Heard recounted their own association and experience with Elizabeth. Fred McDonald was the after dinner speaker, and took great delight in recalling events which seemed to incriminate Elizabeth, who in turn just kept saying "it's all lies !!'. On behalf of all those who attended and others who sent apologies, Myron Zalucki presented Elizabeth with a painting (see photo).

Contrary to the report in the last issue of Myrmecia, Professor Gordon Gordh has not yet commenced as Departmental Head, but will definitely be arriving in the Department on February 8th. We all look forward to his arrival, particularly acting head Myron Zalucki, who will be handing over the reins and then preparing for his own study leave to the USA.

Two PhDs have recently been granted, Glynn Maynard for "Systematic Studies on Australian *Leioproctus* Smith (Hymenoptera: Colletidae)" and

Elizabeth Exley with the watercolour presented to her on her retirement.

Helping Elizabeth celebrate are (L to R) Lesley Ballantyne, Graham White, Judy King, Tim Heard, Ian Naumann, Elizabeth, Joan Bryan and Ted Dahms.

Lesley Ballantyne for "Revisional Studies on Flashing Fireflies (Coleoptera: Lampyridae)". Congratulations also to Fiona Macrae and Michael Ross who have recently completed their honours year within the Department.

Elleni Patrick has recently commenced as research assistant with Gimme Walter working on genetic variation in *Nezara viridula*. Elleni is taking over from Michael Ryan who is commencing a PhD with the CTPM.

Stella Shackel from the University of Wales, Cardiff, has joined the Department to gain experience in Entomological research during a one year sandwich semester.

Eric Reye recently visited Cairns as a consultant on biting midges for the Mulgrave Shire Council.

Margaret Schneider, Joan Bryan and Greg Daniels have finished the report of their findings during the Cape York Peninsula Scientific Expedition to Heathlands for the Royal Geographic Society of Queensland. They found new species and added new distribution records for various Diptera during their March 'wet season' sojourn. As it was unusually dry for a wet season, Greg is itching to return for some more collecting, possibly in 1994. In the meantime he has settled for a five week collecting expedition through the Northern Territory. This trip was well timed to avoid the Christmas/New Year frenzy.

Queensland Museum

Robert Raven returned from the Hennig (cladistics) Conference in Paris with tales of the importance of molecular taxonomy and its dominance, a new cladistic utility (CLADOS), global biodiversity mapping, and various taxonomic mapping tools. During a stopover in Singapore, he was fortunate enough to collect the only known male of the intertidal genus *Idictis*.

Doug Cook did a quick servicing round in February of the network of Central Queensland rainforest pitfall and flight intercept traps we established last November and reports that they have survived the first onslaught of the wet season. On the same trip in November when the traps were installed, our party of four (Doug, Geoff Monteith, Geoff Thompson and Heather Janetzki) were placed on remote South Percy

Island (80km SE of Mackay) courtesy of the Marine Parks patrol boat to search for a new species of Cooloola monster (Orthoptera: Cooloolidae). A single male had been picked up there by a visiting ranger Steve Pearson 10 months earlier. Monsters are subterranean with no surface indication of their presence so random digging with post-hole shovels is the approved method. In the searing heat which prevailed we elected to dig each day for three hours before dusk. Considerable jubilation greeted the first specimen which didn't turn up until three days into the trip. The tally at the end of the week stood at five, all immature females, three of which were still alive and feeding well on mealworm pupae at the Queensland Museum. Incidentally, during digging we calculated the cost per kilogram of field work to collect Cooloola Monsters....but we're not telling you!

Our successful workshop series for teachers, "Insects in the Classroom", goes interstate when Heather Janetzki and Geoff Monteith visit Sydney and Melbourne in early March to run sessions at the Australian Museum and the Museum of Victoria in conjunction with the touring display of robotic insects "Gargantuans from the Garden". The Queensland Museum's own travelling exhibition, "The Butterfly Man of Kuranda", goes to Cloncurry, Mount Isa and Charters Towers during March-June and we plan a driving tour of teachers workshops to those centres in late April. Those interested in any of these workshop activities may get details from QM on 07-8407608.

Cooperative Research Centre for Tropical Pest Management

The last few months have seen the arrival of many new faces at the Centre. Andreas Quale from the NKI College of Computer Science, Norway, will be spending a six month sabbatical with the Modelling Group at the Gehrmann Building, while Graciela Lescano, a Visiting Fellow from the Atomic Energy Commission of Argentina has been working with Bob Corcoran and Neil Heather, looking for molecular markers for irradiated fruit fly larvae in fruit treated for export. The Centre is very pleased to congratulate and welcome Martin Benfield, Sonya Broughton, Jan Green, Michael Ross, Michael Ryan and Mark Stanaway who have accepted CTPM Postgraduate Scholarships. Congratulations also to Ross McLeod who takes up a P/G scholarship for his Master of Agricultural Economics studies.

Geoff Norton spent early December in India presenting two papers at a CIBA meeting on Crop Protection in Sustainable Agriculture at Madras, and visiting ICRISAT (the International Crops Research Institute for the Semi-Arid Tropics. In early February Geoff will be attending the International Grasslands Congress in Wellington, New Zealand, and will be 'in charge' of a poster and computer demonstration of Climex.

Manon GRIFFITHS
Regional Councillor

SOUTH AUSTRALIA

Private Entomology Sector

Crop Monitoring Services' entomologist James DeBarro is now in his busiest part of the year monitoring lucerne seed crops for pest problems. As yet native budworm (*Helicoverpa punctigera*) has caused minimal problems, with green mirids (*Creontiades dilutus*) being a major concern. *Etiella* is likely to cause problems in dryland crops, with seed wasps (*Bruchophagus roddi*) a threat to both dryland and irrigated crops.

Crop Protection Dept (Entomology Group) Waite Institute

Andy Austin, Paul Dangerfield, Janine Lloyd and Frances FitzGibbon spent a successful month collecting throughout the centre and the Top End in November. The main aim of the expedition was to collect cardiochiline wasps, which, indeed, was achieved, but just as importantly general collecting should provide other material of interest.

Frances also submitted her PhD thesis entitled "Woolly Apple Aphid: Interactions within an Orchard System". Darryl Hardy has also successfully submitted his thesis entitled "Resistance to the Pea Weevil in *Pisum* species". Andy Austin has spent all of his time since the field trip to Canberra on study leave based in ANIC away from the pressures of academic administration and teaching but deep in the rigours of research.

Derek Maelzer and Roger Laughlin have both retired from their positions and will be missed greatly. They are both looking forward to active and varied retirements and will still be in contact with the Waite as a base. The Department is in

the process of advertising for an insect ecologist to replace them. A difficult task to replace two such long-standing and prominent entomologists with one person (but let's be thankful, at least, for the one position). And on the social scene a fantastic new three piece band "Static Life Focus" or the "Evil Weevils" has emerged from within entomology to entertain the swarm and are keeping everyone buzzing.

Primary Industries

Joe Knapp, Citrus IPM specialist from the University of Florida visited Geoff Furness at the Loxton Research Centre in October. His interests are citrus spraying oils and the new Australian Standard, commercial IPM services in citrus, and spray application technology. While in the Riverland he also visited Biological Services at Loxton (James Altman), Yandilla Park at Renmark (Scott Dix), Craig Fuetrill at Waikerie, and Vogt Engineers at Tarlee, who are manufacturing Auspray multi-head air assisted citrus sprayers.

Geoff Furness from the Loxton Research Centre, Trevor Wicks from the Northfield Laboratories and Brian Young from Spraysearch, Werribee, Vic. presented information on spray application to grapevines at a seminar organised by the Penfolds Wine Group at the Karadoc Winery, Mildura on 12 and 13 October.

Ken Henry and Dennis Hopkins were kept busy during October-December being involved in a Locust Control program.

University of South Australia

Alan Mead's ARC funding comes to an end this year and Grant Fleming, his PhD student, will move a step closer to the breadline as he continues to look at the life histories of *Mesostoma* (flatworms) as potential control agents for small environment mosquitoes.

Along with Jacqueline Clark, an undergraduate student, Mike Kokkinn and Grant Fleming have undertaken the task of identifying mosquitoes collected routinely by the South Australian Health Commission.

Mike Kokkin had his work cut out recently to put the brakes on sensationalism ("When do you think Dengue Fever will reach Adelaide?") when he was interviewed by Channel 10 on the spread of diseases by mosquitoes in South Australia. The task was made easier by the example of the level headed Phil Weinstein (Epidemiology, SA Health Commission) who was also interviewed for the program.

Good news is that Mike Kokkinn was awarded $6000 on a pre-competitive ARC grant to build a wind tunnel out at the Waite Institute. They'll soon be dubbing Adelaide entomologists as a bunch of windbags! [*Have you considered that this might be an improvement, Paul? - Ed.*]

An interesting and still highly secret collaboration between Bruce Firth (Anatomy Dept, University of Adelaide) and Mike Kokkin on *Culex quinquefasciatus* continues to cause them much loss of sleep (watch this column for news).

The mosquito laboratory in the basement of the Reid Building on Frome Road is now equipped with a set of sophisticated environmental cabinets, one of which can mimic diurnal fluctuations in temperature and light ("dial a season"). Their design and installation was accomplished due to fine work by Fred Stace, our marvellous electronics technician. These cabinets have already been used to produce a startling discovery with regard to the influence of temperature on development in *Culex quinquefasciatus*.

South Australian Health Commission

Phil Weinstein has completed his training term in medical epidemiology with the Communicable Disease Control Unit, and has been awarded Fellowship of the Australian Faculty of Public Health Medicine for his efforts. He leaves in March to take up a lectureship in the Department of Zoology at James Cook University with Prof. Rhondda Jones, where he hopes to maintain an active research interest in medical entomology.

Paul DANGERFIELD
for Andy AUSTIN
Regional Councillor

VICTORIA

Department of Agriculture
Institute of Plant Sciences, Burnley

During November, Mali Malipatil visited Darwin for about a week to assist with the establishment of a project entitled "Role of predators and parasites in cashew insect pest control at Wildman River". This is to be conducted by Shaun Hood as part of a Ph.D. degree based at the University of Queensland, St.Lucia. Mali is joint supervisor of the project along with Myron Zalucki

(UQ), Peter Room (CSIRO) and Stuart Smith (NTDPIF). While in Darwin, Mali caught up with his friends and former colleagues at the Northern Territory Museum.

Ian Faithfull visited the ANIC in January to examine *Onthophagus* for records from carnivore dung and to identify miscellaneous specimens. He suggests that insect collectors travelling on the Hume Highway at night should stop at the Avenel roadhouse, instead of wasting time in setting up light traps. Ian also recently collected the introduced *Aphodius fimetarius* for the first time in South Australia.

Paul Horne and Garry McDonald have just begun work on a project looking at invertebrates in conservation tillage systems in Victoria. They intend to survey for surface and soil-dwelling insects, both pest and beneficial, to determine the effects of management practices on the insect fauna. This means that they will be travelling north and west of Melbourne regularly for a year or so.

Paul, along with Andrew Henderson, is also in the process of constructing a flight tunnel, based on the design of Mike Keller, to be used in insect behaviour studies. They have also moved their potato moth monitoring and pheromone-trap trials for another season in the Thorpdale and KooWeeRup districts, as part of their IPM implementation project. Also in the pipeline is a video for the purpose of explaining IPM to potato growers.

Mark Smith, Garry McDonald and Peter Ridland attended a 2-day meeting at Northfield Research Laboratory in November to discuss the development of a national expert system for IPM in winter grain legumes. Geoff McIntyre (QDPI) and Greg Baker (SA Dept. Ag.) organised the show for entomologists from all over Australia. The aim is to have a system concentrating on budworm and pea weevil management in field peas, chickpeas and lupins.

Mark Smith also visited T.J. Higgins and Mark Schroeder at CSIRO Plant Industries, Canberra in December to discuss bioassaying pea weevil on resistant pea lines (entomologist meets plant breeder and biotechnologist!)

Department of Agriculture
Institute of Plant Sciences, Frankston

Nancy Endersby received a visit from Peter Cameron (New Zealand Institute for Crop & Food Research Limited) in November to discuss parasitoids of *Plutella xylostella* and *Pieris rapae*. She also made a trip to meet with John Hargreaves (QDPI - Redlands Research Station) and talk about insecticide resistance in *Plutella* as well as visiting the Lockyer Valley and Sue Heisswolf at DPI Gatton to discuss IPM in crucifers.

Alan YEN and Andrew HENDERSON
Regional Councillors

WESTERN AUSTRALIA

Curtin University

Hyean Cheal Park has now completed writing his PhD thesis on the feeding habits of *Drepanotermes tamminensis* and has returned to Korea where he takes up a lecturing position at Dong-A University. Jonathan Majer is bench-bound in his laboratory, sorting through the ants which he collected in an Amazon bauxite mine. He is finding between 40 and 55 species per rehabilitated area.

Dept of Agriculture

Stewart Learmouth reports that he had a visit from Dr Tom Drinkwater from Summer Grain Centre in Potchefstroom, South Africa, to discuss African black beetle pest problems and to talk to farmers. A new systemic insecticide used as a seed dressing on maize was of great interest.

David James, from NSW Agriculture at Yanco, also visited to discuss vine mites and the possibility of a joint project with WADA.

Agriculture Protection Board

Peter Davis and John Van Schagen are still travelling up and down to Derby, monitoring the Singapore ant bait trials. A couple of the five fire-ant baits used look very promising at this stage. Trials are also underway to test these baits on coastal brown ants, to increase the market for a suitable bait in Australia. Boxes full of samples are accumulating in the laboratory waiting to be sorted. Peter and John are currently stuck behind desks, writing a review of Argentine ant research in Western Australia.

John VAN SCHAGEN
Regional Councillor

OVERSEAS NEWS

New Zealand

Ricardo Palma, Museum of New Zealand, Wellington was invited to join a group of Canadian entomologists who spent three months on the Galapagos Islands collecting insects of several orders. Ricardo was searching for bird and mammal ecto-parasites, especially lice, while his colleagues surveyed moths, beetles and other smaller groups. The expedition leader, Professor Stewart B Peck (Carleton University, Ottawa) has been involved in the entomological research of the "Enchanted Islands" for several years, working in collaboration with a number of specialists.

A recent visitor to New Zealand was larvae and adults of the so called Asian tiger mosquito, *Aedes albipictus*, a vector for dengue fever, yellow fever and encephalitis. The mosquitos were found in a shipment of used tires from Japan and were quickly dispatched to the great mosquito breeding grounds in the sky. I understand this mosquito is also occasionally intercepted at Australian borders. The New Zealand climate is likely to be too cool for its establishment, but with global warming, who knows? The incident does illustrate however, the importance of adequate surveillance at ports of entry.

John TENQUIST
NZ Correspondent

Papua New Guinea

The entomological front in Papua New Guinea has been rather quiet lately. Ray Kumar moved from Agricultural Protection Division to take charge of DAL Publications and editing the PNG Journal of Agriculture, Forestry and Fisheries (PNGJAFF) and other DAL publications on a full time basis. Jan Briethaupt continued his studies on the biological control of the Asiatic stem-borer, *Ostrinia furnacalis*. Thus far his studies have indicated that the egg parasite *Trichogramma plasseyensis* was the most important parasitoid and a NPV also played an important rôle to control the third and fourth instar larvae. Three other parasitoids were also of interest to reduce the borer population in the field. Details of the research will appear in the next issue of PNGJAFF. Bob Proior (CCRI) is on his recreation leave in Britain while Fred Dori is back at post carrying out postquarantine of *Heteropsylla* from Charters Towers. Lastus Kuniata remains immersed in his sugarcane borer work.

Ray KUMAR
PNG Correspondent

NEWS FROM AFFILIATED SOCIETIES

Entomological Society of Queensland

In August Bob Wharton, a braconid parasite taxonomist from Texas A & M University, gave a talk entitled 'Parasitic Hymenoptera attacking fruit infesting tephritids, with emphasis on opiinie Brachonidae'.

In September, a number of members of the Society who had attended the XIXth International Congress of Entomology in Beijing in July, gave us their impressions. Doug Kettle, Peter Room, Don Sands and Merv Bengston spoke on aspects of the scientific sessions, the size and venue of the congress, life and agriculture in China and traditional uses of insects in China. These talks were a good substitute for those who were not able to attend the congress.

"Mosquito-borne human pathogens in Australia" was the title of Joan Bryan's address to the meeting in October. This was a coverage of all past, present and potential mosquito-borne diseases threatening Australia.

At the November general meeting Gus Macqueen gave an address entitled 'Dung into dust - reflections on the African dung beetle introductions in Queensland'.

A highlight of the year was the December meeting. The format was changed from the usual Christmas Barbecue and Notes and Exhibits meeting. In its place the Society combined with the Department of Entomology, University of Queensland to hold a retirement farewell for Elizabeth Exley (see photos pages 23 & 24). The formal part of the evening consisted of addresses by some of Elizabeth's colleagues and former students - focusing on her contributions to entomology. Ian Naumann spoke on 'The importance of maintaining our teaching and expertise in systematics'. Graham White and Joan Bryan then outlined the contributions Elizabeth has made to the Society and to the Department of Entomology respectively. Judy King, Lesley Ballantyne and Tim Heard, three of Elizabeth's more recent students, outlined her contributions to the systematics of megachilid bees, Lampyridae and to native bees and pollination. The evening

continued with barbecue dinner, after dinner speeches and the presentation of a painting to Elizabeth.

Christine NEALE
Representative Councillor

Entomological Society of Victoria

The December meeting of the Society is traditionally a members' exhibit night and a range of interesting slides and exhibits were displayed by David Holmes, Ian Endersby, Mike Coupar, Mark Shutze and Ken Walker. Of special note was Ken's exhibit of a large live South American theraphosine "tarantula" spider that had been recently seized by quarantine officers from a residence in Geelong. The spider, and seven others, are now under quarantine at the zoo, however Ken had received a permit to exhibit one spider at the meeting.

Also at the December meeting it was announced that **Mr Peter Kelly** would receive the Zoo LeSouëf Memorial Award. Peter has made a substantial contribution to entomology in Victoria over the last 30 years with his involvement in the Society and his numerous talks at Field Naturalist Club meetings throughout Victoria. Peter was a council member of the Society from 1968 to 1992 and President from 1970-1971 and again from 1982-1983. His main interest has been in beetles and over many years he has travelled widely in Australia to collect, rear and photograph leaf beetles in the *Paropsis* complex. This research is now being prepared for publication and will be of great value to many professional and amateur entomologists collecting and working on this important group. Congratulations go to Peter from the Society for a well deserved honour.

Ross FIELD
Representative Councillor

Entomological Society of New South Wales

Many members contributed to a long overdue Show and Tell meeting in November. Included were a presentation, by Bob Lormer, on the work of the late Dallas Doolan and two short films showing the somewhat out-dated practices used in the control of Argentine ants in the 1960's.

Alan Westcott spoke to the December meeting on the trials and tribulations of biological control workers and the problems and precautions associated with introducing biocontrol agents into Australia.

The Annual Dinner was held at the Ku-ring-gai Wildflower Garden and included native foods. A full report on the dinner follows.

Graham BROWN
Representative Councillor

Annual Dinner of the Entomological Society of New South Wales

The Entomological Society of NSW provided its members with a chance to indulge in a gastronomic experience with a difference at the Annual Dinner held on Saturday 7th November at the Ku-rin-gai Wildflower Garden. The theme for the dinner was entomological, and this was highlighted by its tempting hors d'oeuvres which consisted of many bits and pieces, literally, of insects. The entrée and main course were less exotic and provided those who were less adventurous with the hors d'oeuvres with something edible.

The dinner itself was created and prepared by Angie Condello and guest speaker Victor Cherikoff. The printed menu was presented in the format of a scientific paper as it would have appeared in *General and Applied Entomology*, the Society's journal and the text follows this report.

Thirty, now highly enlightened, members and friends attended the function. To many this entomological cuisine experience will be their first and last. Yet to a select few!!! it merely wet their adventurous appetites (see photos next page).

Late evening walks through the gardens and some insect collecting around Max Moulds' light trap were other features enjoyed by those who attended. The evening was a great success and enjoyed by all.

Angie CONDELLO
BCRI, Rydalmere

MENU OF THE ANNUAL DINNER OF THE ENTOMOLOGICAL SOCIETY OF NEW SOUTH WALES.

A.A. Condello* and V. Cherikoff*
*Current address: Ku-ring-gai Wildflower Garden, St Ives
Menuscript accepted 7 November 1992

Summary

The Annual Dinner of the Entomological

Society of NSW will commence with Curry Puffs and a range of entomological tidbits provided by V. Cherikoff, including Bogong Moth fingers with melted Motzarella cheese, roasted Witchetty Grubs and Witchetty Grub dip followed by smoked kangaroo wrapped around melon. The first course is Spinach Baked Calamari and will be followed by Minted Chicken with Sweet Orange Sauce and green bean amandine, steamed carrots and baked Danish potatoes. Dessert comprises home-made Wattle Icecream with Wattle Anzac biscuits and this will be followed by coffee and tea with chocolate mints.

Introduction

Descaled *Agrotis infusa* (Boisduval) (Noctuidae) topped with congealed residue of lipid component of separated mammary gland secretion of *Bos taurus* L. (Bovidae) lightly grilled on fingers of milled, leavened and baked *Triticum aestivum* L. (Poaceae). Diced pieces of *Bos taurus* L. (Bovidae), *Daucus carota* L. (Apiaceae), *Pisum sativum* L. (Fabaceae) and *Capsicum annuum* L. (Solanaceae) combined with flavours of *Curcuma aromatica* Roxb. (Zingiberaceae), seeds of *Elettaria cardamomum* (L.)(Zingiberaceae) and *Coriandrum sativum* L. (Apiaceae) and then coated in a solution of milled *Triticum aestivum* L. (Poaceae) and deep fried. Also *Xyleutes leucomochla* Turner (Cossidae) larvae will be served, some lightly pan roasted and others stir fried and macerated, as a dip. Smoked tender loin of *Macropus rufus* (Macropodidae), basted and wrapped around *Cucumis melo* L. (Cucurbitaceae).

Materials and Methods

Loligo vulgaris Lamarck (Loliginidae) dissected and stuffed with fresh leaves of *Ocimum basilicum* L. (Lamiaceae), *Beta vulgaris cicla* (L.)W.Koch (Chenopodiaceae) and congealed residue of liquid component of separated mammary gland secretion of *Capra hircus* L. (Bovidae). Served with a purée of *Lycopersicon*

Danuta Knihinicki and a sceptical Ted Taylor consider the hors d'oeuvres at the Ent. Soc. NSW dinner [photo: Noel May]

At the Ent. Soc. NSW Annual Dinner (L to R): Dave McKenzie, Trevor Gibson, Penny Gullan, Peter Cranston, Graham Brown. [photo: Noel May]

Max Moulds and Murray Fletcher demonstrating the "eyes closed" approach to eating insect larvae at the NSW Ent. Soc. dinner. [photo: Chris Ann Urquart]

esculentum Miller (Solanaceae) on a bed of steamed seeds of *Oryza sativa* L. (Poaceae).

Results

Baked breast of *Gallus domesticus* L. (Phasianidae) filled with fresh leaves of *Mentha australis* L. (Lamiaceae) and served with a generous sweet *Citrus sinensis* Osbeck (Rutaceae) sauce. Side dishes include *Phaseolus vulgaris* L. sautéed with roasted flakes of *Amygdalus communis* L. var. *sativa* Ludwig (Rosaceae), *Daucus carota* L. (Apiaceae), lightly steamed and *Solanum tuberosum* L. (Solanaceae) baked with a light crust comprising milled *Triticum aestivum* L., leavened and baked. Crystalline sodium chloridae and powdered seeds of *Piper nigrum* L. (Piperaceae) will be available for taste.

Discussion

Domestic frozen agitated extraction of *Bos taurus* (Bovidae) mammary gland secretions flavoured with extract of *Acacia* sp. (Fabaceae) and accompanied by baked patties of sweetened, milled *Triticum aestivum* L. (Poaceae) flavoured with essence of *Acacia* sp. (Fabaceae).

Conclusion

Effusion of *Coffea arabica* L. (Rubiaceae) or *Camellia sinensis* (L.)Kuntze (Theaceae) served piping hot and accompanied by *Mentha piperita* L. (Lamiaceae) encased in cocoction of *Theobroma cacao* L. (Sterculiaceae). Bovine mammary secretion and crystallised extract of *Saccharum officinale* L. (Poaceae) will be available for those who indulge.

Acknowledgments

The authors would like to thank Ku-ring-gai Municipal Council and the Council's Interpretation Officer, Jonathon Howard, for allowing us to use the excellent facilities of the Ku-ring-gai Wildflower Garden for this dinner. Thanks are also due to Murray Fletcher and Peter Gillespie for the production of this menu and for the superb tpyesetting and exellent speling.

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COMING EVENTS

TOWARDS BIODIVERSITY AND CONSERVATION

Queensland Museum
12-16 July 1993

Details in *Myrmecia* 28(3): 25

The original expression-of-interest circular drew 150 responses from 14 countries.
Registration costs $150 if paid before April 30.

Registration forms from:

Dr Glen Ingram
P.O. Box 3300
South Brisbane 4101
Fax (07) 8461918

CONSERVING BIODIVERSITY - Threats and Solutions. University of Sydney 29 June - 2 July 1993

Details in *Myrmecia* 28(4): 43

Contact:

Lynda Wild, Conference Coordinator
National Parks and Wildlife Service
PO Box 1967
Hurstville NSW 2220
Tel: (02) 5856417

AES CONFERENCE REMINDER

The brochure for the 24th AGM and Scientific Conference of the Australian Entomological Society, to be held in Cairns 3-8 July 1993, accompanied the last issue of Myrmecia. Those who missed a brochure can obtain one by contacting Ross Storey or Harry Fay on (070) 921555.

Please assist the Organising Committee by submitting registrations and abstracts as early as possible, the deadline for both being 31 March. The conference will deal with a diverse range of entomological topics and an excellent group of keynote speakers will introduce each of these. We look forward to your response!

Second Canberra Meeting on *Bacillus thuringiensis*

21-23 September 1993
CSIRO Division of Entomology

The second Canberra *Bacillus thuringiensis* (Bt) meeting builds on the success of the first meeting held in September 1991. The second meeting will be a symposium format with contributed papers and posters in addition to invited speakers; it will also include a trade exhibition. The meeting will address the major aspects of Bt research and usage. Topics will include:

- Current status of Bt
- Bt usage in Australia
- Transgenic organisms
- Mode of action
- Resistance (mechanisms and management strategies)
- New toxins
- Production technology
- Registration
- Application technology
- Social issues
- Other *Bacillus* spp (such as *B. sphaericus* and *B. popillae*)

Contact: Dr David Dall
CSIRO Division of Entomology
GPO Box 1700
CANBERRA ACT 2601
Ph: (06) 246-4117
Fax: (06) 246-4000
E-mail: davidd@ento.csiro.au

MARKET PLACE

Philippine Butterflies for sale

Edison C. Wilson of Albert Park, Victoria, advises that he has a large number of specimen butterflies from the Philippine Islands available at reasonable cost. He is in regular contact with professional collectors throughout the SE Asian Islands and can guarantee a regular supply of excellent and rare specimens of butterflies, beetles and other insects.

Any member interested in viewing Mr Wilson's collection should contact him on (03) 690 1948 or via PO Box 132, Albert Park, Victoria, 3206.

REQUEST FOR CONTACT
Russian Lepidoptera

We have received a request from Yuri Brezhnoi, Andrey Budarin and Marina Holkina for contact with Australians interested in butterflies, moths and, to a lesser extent, beetles. These three have established a company to study, breed and protect butterflies and moths and have organised a network within Russia for the exchange of eggs, pupae and information on species of interest.

Members who wish to communicate with this group should write direct to:

Yuri Iv. Berezhnoi
Post Office 29
394029, Voronezh
RUSSIA

Visiting Hong Kong?

Free accommodation in Hong Kong for professional entomologists interested in visiting Hong Kong for up to two weeks for collection or studies of our local insects.

For details please contact:
Dr Mike Crosland
Biology Department
Chinese University of Hong Kong
Shatin, N.T.
HONG KONG

Australian Entomological Society
RESEARCH GRANTS

CALL FOR APPLICANTS

The Executive takes pleasure in calling for applications for the Australian Entomological Society Research Grants for 1993. The Scheme is intended to encourage the advancement and dissemination of entomological knowledge, particularly in relation to the Australian fauna. Grants may be given for items such as travel, equipment or technical support.

The Grants are primarily for small, short-term projects and will be available only to financial members of the Society of at least 12 months standing. Groups will be eligible provided that the primary researcher is a member. Total funds available will be in the order of $1,000. A report to the Executive in a form suitable for publication in *Myrmecia* will be required by the end of 1994.

The application should clearly state:

✧ the aim of the project ✧ the expected duration of the project
✧ a detailed budget ✧ your contact address and telephone number

You may also supply the names of one or two referees if you wish.

The President will appoint a selection committee to allocate and administer the grants. Applications may be for any amount up to $1,000, but remember that small, short-term projects which enable a diverse range of work to be funded will be favoured. Successful applicants for 1993 will be advised in June.

Five copies of your application should reach the Secretary at the following address no later than 30 April 1993

Dr Paul Madge
AES Honorary Secretary
c/- Dept of Crop Protection
Waite Campus
University of Adelaide
PO Glen Osmond SA 5064

Insect Illustration Competition 1993

"A competition to encourage and recognise high standards of entomological illustration"

The Society invites unpublished entries to this competition which will be judged and displayed at the AGM and Scientific Conference to be held in Cairns in July 1993. The competition is open to members of the Society who are not employed or contracted as professional illustrators for fee or reward.

Entries, up to three per entrant, must be either black and white or coloured, whole body (dorsal or lateral views) taxonomic illustrations of insects or allied forms, such as shown in *Insects of Australia*. The mounted illustrations should not exceed 21 x 30cm (approx. A4 size) and must be suitable for reproduction after reduction by 50%.

The Society shall have the right to display selected works in public and to reproduce the illustrations, with appropriate acknowledgment, on Society goods which it sells, and in magazines for a fee.

Entries must be in the hands of the Convenor of the AGM by the end of April 1993. Postal entries must be carefully packed and included stamps or postal order sufficient to cover the cost of return postage, where necessary.

Categories:
- Student section - Colour
- Student section - Black and White
- Open section - Colour
- Open section - Black and White

The Society will award monetary or other prizes for First and Second prize in each of the four categories.

Name of Entrant: . . . . . .

Address: . . . . . .

Category of Entry(s): . . . . . .

Scientific Name of Insects (preferable) . . . . . .

Forward this form, with your entries, to

Mr Ross Storey
Convenor, AES 24th AGM & Conference
Queensland Dept of Primary Industries
PO Box 2054
Mareeba QLD 4880

Australian Entomological Society

PHIL CARNE PRIZE 1993

This Award for scientific writing is open to **students who have not yet gained their PhD by 3 July 1993.** Entrants need not be members of the Society.

Submissions should be in the form of a scientific paper of 5000 words or less, on entomological research.

Entries will be judged by a committee of senior entomologists appointed by the President of the Society.

The winner will receive $250 cash and will be invited to present the winning paper at the AES Scientific Conference to be held in Cairns on 3-8 July 1993. The Society will provide free conference registration, accommodation in Cairns and a return economy air fare from the winner's home State.

Please indicate your intention to submit an entry by completing the form overleaf and returning it to the Secretary by **1 April 1993**.

Three copies of the paper, one and a half or double-spaced, should be in the hands of the Secretary, at the address given below, by the end of May 1993.

Dr Paul Madge
AES Honorary Secretary
c/- Dept of Crop Protection
Waite Campus
University of Adelaide
PO Glen Osmond SA 5064

Australian Entomological Society
PHIL CARNE PRIZE 1993

This is to advise that I intend to submit a paper on original entomological research for consideration for the Society's Phil Carne Prize in 1993.

My name is: . . . . . .

My postal address is: . . . . . .

. . . . . .

My paper will deal with (tentative title acceptable): . . . . . .

. . . . . .

I am (or was) a student at (name of Institution): . . . . . .

. . . . . .

My Supervisor's name is (or was): . . . . . .

My current professional qualifications are: . . . . . .

. . . . . .

I will forward 3 copies of my entry to reach you by 31 May 1993, and acknowledge that a paper which is not received by that date cannot be accepted for judging.

Signed: . . . . . .

Date: . . . . . .

Return completed form to:

Dr Paul Madge
AES Honorary Secretary
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PO Glen Osmond SA 5064

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